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1007531

| REVISIONS 12031 | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPROVAL |
| A | REVISED PER TDRR 12628 | 2/28/64 | |

DASH NO. 011

| PART NO. | DESCRIPTION | REQD. |
|---|---|---|
| 1008101-000 | Frame, Tray 1 | 1 |
| 1006774 | Insulator, Wrapost, Female Miniature | 149 |
| 1006781-2 | Contact, Wrapost, Female Miniature | 149 |
| 1010382-1 | Contact, Blade Edge Connector | 84 |
| 1010383-1 | Insulator, Wrapost, Male | 84 |
| 1010622-1 | Connector Receptacle | 1 |
| 1010620-4 | Pin, Guide | 20 |
| 1010620-5 | Pin, Guide | 2 |
| 1001317 | Retainer, Jack Screw | 1 |
| 1008172 | Screw, Jack | 30 |
| 1008098 | Screw, Socket Head, | 1 |
| 1004206 | Washer Thrust | 60 |
| 1008099-2 | Washer | 1 |
| MS 16995-10 | Screw, Cap, Socket Head | 3 |
| MS 16995-11 | Screw, Cap, Socket Head | 2 |
| MS 21045 C 04 | Nut, Self-Locking Hex | 2 |
| MS 171433 | Pin, Spring | 30 |
| 1004207 | Drive Cylinder | 30 |
| 1007088 | Assembly, Buffer Resistor Module | 1 |
| 1008552-001 | Gasket, Connector | 1 |
| 1008551-001 | Gasket, Connector | 1 |

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|

LIST OF MATERIALS

MASTER

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| | |
| 1007571 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN Hansen DATE 2/27/64
CHECKED
APPROVAL
APPROVAL J. A. Test 2/28/64
NASA APPROVAL [illegible] 4/15/64
MIT APPROVAL W Kupfer 2 May 64

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME ASSEMBLY
TRAY 1
(100 SERIES)

CODE IDENT NO. | SIZE C | NASA DRAWING NO. 1007531
SCALE | WT | SHEET 1 OF 1

INCHES 0 1
PHOTOGRAPHIC SCALE ONLY

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| SYM | REVISIONS 12031 DESCRIPTION | DATE | APPROVAL |
|---|---|---|---|
| A | REVISED PER TDRR 12628 | 11-5-64 | |
| B | REVISED PER TDRR 13227 | 11-6-64 | |

B 1007531

| PART NO. | DESCRIPTION | DASH NO. 011 REQD. | DASH NO. 021 |
|---|---|---|---|
| 1008101 | Frame, Tray 1 | 1 | 1 |
| 1006774 | Insulator, Wrapost, Female Miniature | 149 | 149 |
| 1006781-2 | Contact, Wrapost, Female Miniature | 149 | 149 |
| 1010382-1 | Contact, Blade Edge Connector | 84 | 84 |
| 1010383-1 | Insulator, Wrapost, Male | 84 | 84 |
| 1010622-1 | Connector Receptacle | 1 | 1 |
| 1010620-4 | Pin, Guide | 20 | 20 |
| 1010620-5 | Pin, Guide | 2 | 2 |
| 1001317 | Retainer, Jack Screw | 1 | 1 |
| 1008172 | Screw, Jack | 30 | 30 |
| 1008098 | Screw, Socket Head | 1 | 1 |
| 1004206 | Washer Thrust | 60 | 60 |
| 1008099-2 | Washer | 1 | 1 |
| MS 16995-10 | Screw, Cap, Socket Head | 3 | 3 |
| MS 16995-11 | Screw, Cap, Socket Head | 2 | 2 |
| MS 21045 C 04 | Nut, Self-Locking Hex | 2 | 2 |
| MS 171433 | Pin, Spring | 30 | 30 |
| 1004207 | Drive Cylinder | 30 | 30 |
| 1007088 | Assembly, Buffer Resistor Module | 1 | 1 |
| 1008552 | Gasket, Connector | 1 | 1 |
| 1008551 | Gasket, Connector | 1 | 1 |
| | Harness Group (100 Series) | 1 | - |
| | Harness Group (50 Series) | | 1 |

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| | | LIST OF MATERIALS | |

| | |
|---|---|
| 1007571 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT
DRAWN Klassen DATE 11/5/64
CHECKED
APPROVAL
APPROVAL D. G. Hoag 11/24/64
NASA APPROVAL 11/25/64
MIT APPROVAL W Kuppr 25 Nov 64

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME ASSEMBLY
TRAY 1

| CODE IDENT NO. | SIZE | NASA DRAWING NO. |
|---|---|---|
| | C | 1007531 |
| SCALE | WT | SHEET 1 OF 1 |

MASTER

INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

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1007531 C

| REVISIONS 12031 | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPROVAL |
| A | REVISED PER TDRR 12628 | 9 SEPT 64 | |
| B | REVISED PER TDRR 13227 | 10-6-64 | |
| C | REPLACED BY CONFIGURATION DWG REV D PER TDRR 13939 | 11/6/64 | |

| PART NO. | DESCRIPTION | DASH NO. 011 REQD. | DASH NO. 021 |
|---|---|---|---|
| 1008101- | Frame, Tray 1 | 1 | 1 |
| 1006774 | Insulator, Wrapost, Female Miniature | 149 | 149 |
| 1006781-2 | Contact, Wrapost, Female Miniature | 149 | 149 |
| 1010382-1 | Contact, Blade Edge Connector | 84 | 84 |
| 1010383-1 | Insulator, Wrapost, Male | 84 | 84 |
| 1010622-1 | Connector Receptacle | 1 | 1 |
| 1010620-4 | Pin, Guide | 20 | 20 |
| 1010620-5 | Pin, Guide | 2 | 2 |
| 1001317 | Retainer, Jack Screw | 1 | 1 |
| 1008172 | Screw, Jack | 30 | 30 |
| 1008098 | Screw, Socket Head | 1 | 1 |
| 1004206 | Washer Thrust | 60 | 60 |
| 1008099-2 | Washer | 1 | 1 |
| MS 16995-10 | Screw, Cap, Socket Head | 3 | 3 |
| MS 16995-11 | Screw, Cap, Socket Head | 2 | 2 |
| MS 21045 C 04 | Nut, Self-Locking Hex | 2 | 2 |
| MS 171433 | Pin, Spring | 30 | 30 |
| 1004207 | Drive Cylinder | 30 | 30 |
| 1007088 | Assembly, Buffer Resistor Module | 1 | 1 |
| 1008552 | Gasket, Connector | 1 | 1 |
| 1008551 | Gasket, Connector | 1 | 1 |
| | Harness Group (100 Series) | 1 | - |
| | Harness Group (50 Series) | 1 | 1 |

© REPLACED BY CONFIGURATION DWG REV D

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| LIST OF MATERIALS | | | |

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| | |
| | |
| 1007571 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

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DWG. NO. CONTRACT

DRAWN Hansen DATE 7/17/64
CHECKED
APPROVAL
APPROVAL D.R. Trent 8/24/64
NASA APPROVAL W.M. Leet 8/15/64
MIT APPROVAL W Kupfer 25 Aug 64

MANNED SPACECRAFT CENTER
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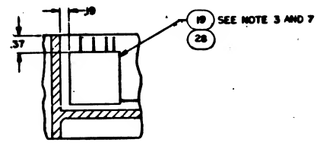
FRAME ASSEMBLY
TRAY 1

CODE IDENT NO. | SIZE C | NASA DRAWING NO. 1007531
SCALE | WT | SHEET 1 OF 1

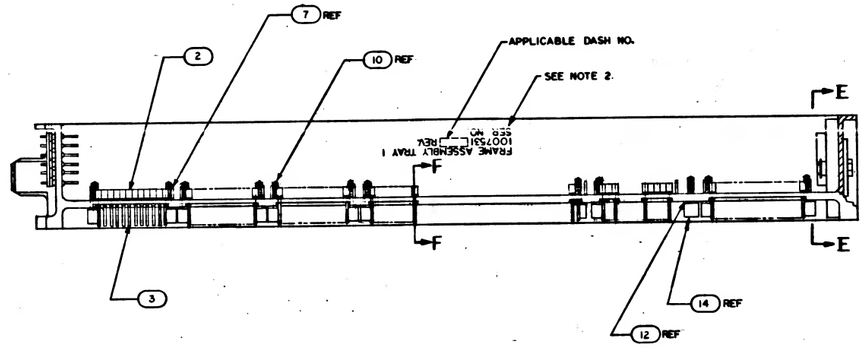
MASTER

INCHES 0 1 2 PHOTOGRAPHIC SCALE CHECK

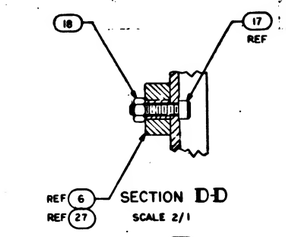
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG. NO. | DATE | APPD |
| D | | REPLACES WORD DWG REV C PER TDRR 13937 | | 1/66 | WR |



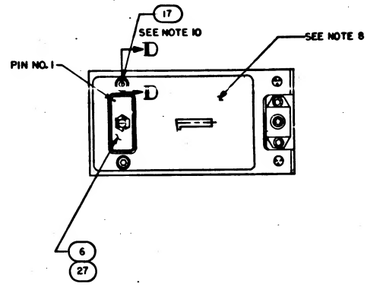

PARTIAL SECTION E-E



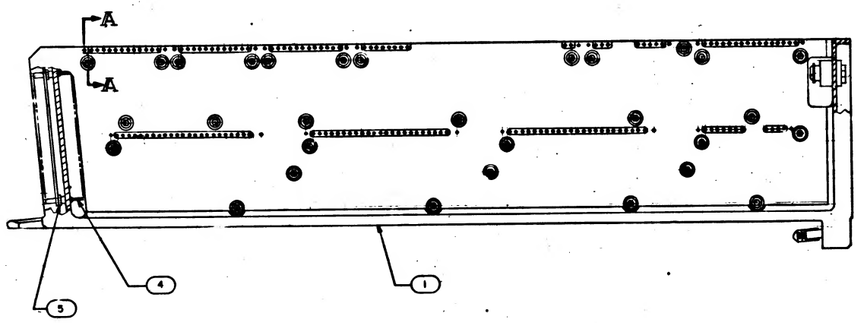
PARTIAL SECTION F-F
149 PLACES

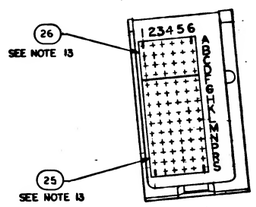


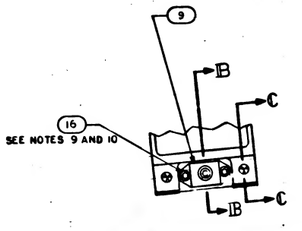

SECTION D-D
SCALE 2/1

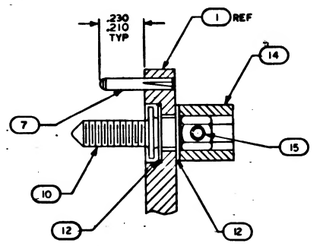



Ⓓ REPLACES WORD DWG REV C

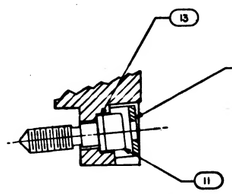


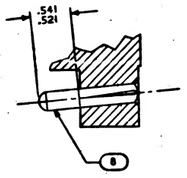




SECTION A-A
SCALE 4/1




SECTION B-B
SCALE 2/1




SECTION C-C
SCALE 2/1

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45AIE7 | 45AIJI-12 |
| ↕ E8 | ↕ -3 |
| E9 | -33 |
| E10 | -17 |
| 45AIEII | 45AIJI-18 |

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER ND 1002019 BLACK,100/140 NHH ( SERIALIZE PER ND 1002023.
3. BOND FIND NO 19 TO FIND NO.1 PER ND1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686.
4. ASSEMBLE FIND NUMBERS 2,3,4 AND 5 PER ND 1002196
5. BOND FIND NO'S 20,21,22,23 AND 24 TO FIND NO.1 PER ND 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER ND 1002002 (BLACK POLYURETHANE FOAM) FLUSH TO .010 BELOW PERIPHERAL SURFACES OF TRAY FRAME
7. SEE CONDUCTOR TERMINATION CHART FOR FIND NO. 19, OR FIND NO. 28.
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO.16 DURING ASSEMBLY TO FIND NO.1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NOS 16 AND 17 TO FIND NO.1 TO BE 5.0-5.5 IN.LB.
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER ND 1002005 ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER ND 1002071 ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS

12 PROCURE PER PS 1007141.
13 BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER ND 1[illegible]37.

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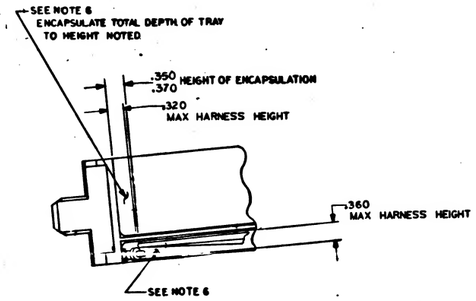
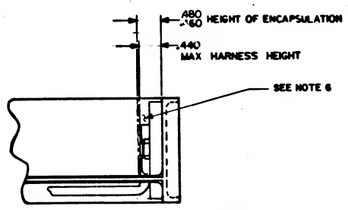
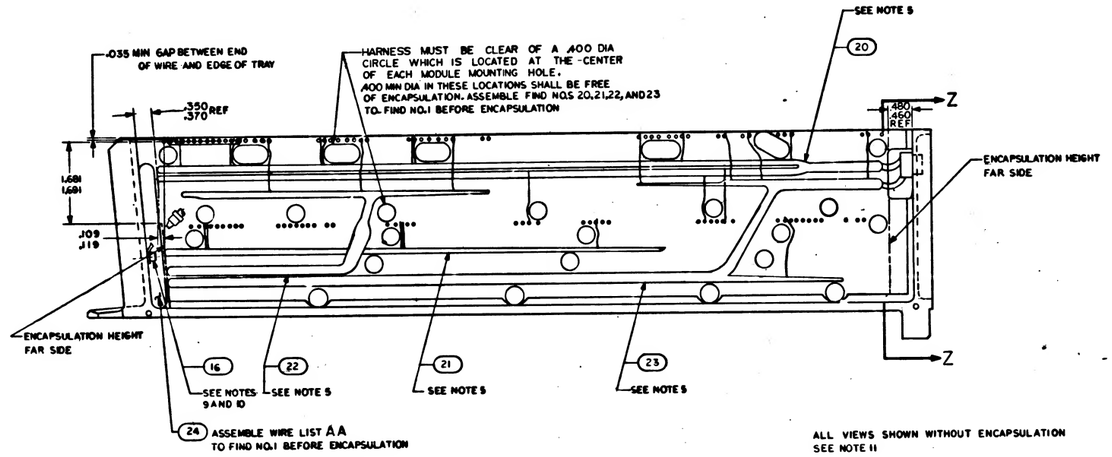
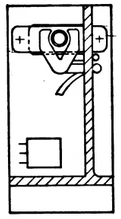
| REVISIONS | | | |
|---|---|---|---|
| LTR | DESCRIPTION | DATE | APPROVAL |
| D | REPLACES WORD DWG REV C PER TDRR 13739 | 4/6/68 | W.K. |




ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| | | LIST OF MATERIALS | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES OR FRACTIONS DECIMALS ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

SETV INSTRUMENTATION LAB
DRAWN W.J. Fox DATE 10/27/67
CHECKED Ed Spring 6/27/68
NASA APPROVAL W.D. Rhodes 11/15/67
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

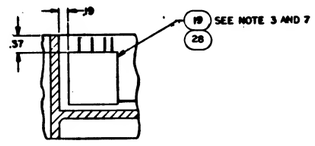
FRAME ASSEMBLY
TRAY 1

CODE IDENT NO. E
SIZE
NASA DRAWING NO 1007531
SCALE 1/1
WT
SHEET 2 OF 2

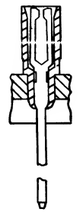
1007531 D

MASTER

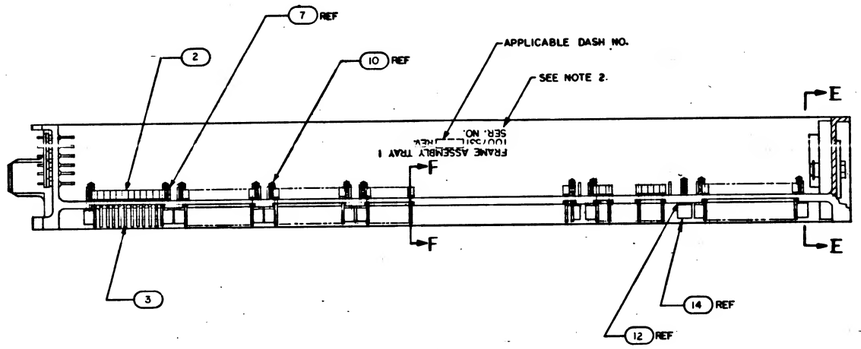
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG. NO. | DATE | APPD |
| D | | REPLACES WORD DWG REV C PER TDRR 13937 | | 4/1/ | |
| E | | REVISED PER TDRR 15150 | | | |

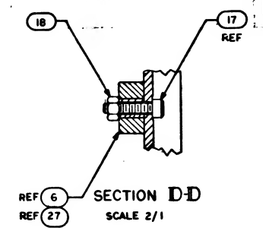



PARTIAL SECTION E-E

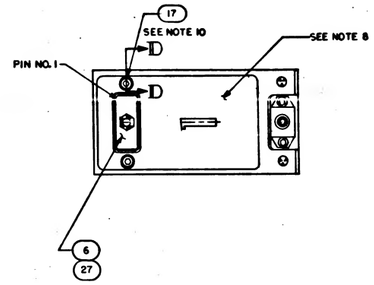


PARTIAL SECTION F-F
149 PLACES

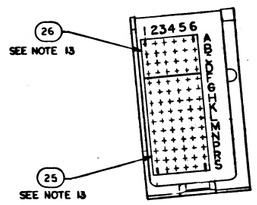


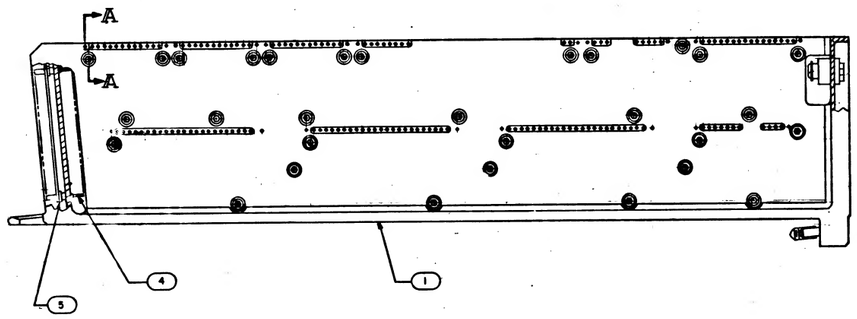



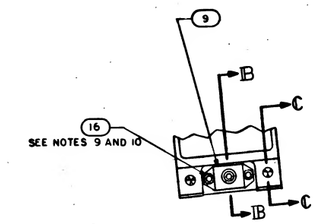

SECTION D-D
SCALE 2/1

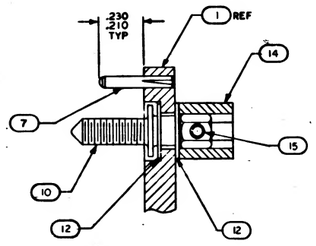



Ⓓ REPLACES WORD DWG PEV C

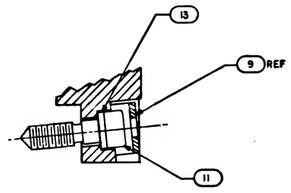


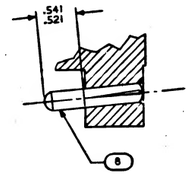




SECTION A-A
SCALE 4/1




SECTION B-B
SCALE 2/1




SECTION C-C
SCALE 2/1

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45A1E7 | 45A1J1-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45A1E11 | 45A1J1-18 |

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER NO 1002019 BLACK,100/140 HIGH ( SERIALIZE PER NO 1002023.
3. BOND FIND NO 19 TO FIND NO.1 PER NO1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686.
4. ASSEMBLE FIND NUMBERS 2,3,4 AND 5 PER NO1002136
5. BOND FIND NO'S 20,21,22,23 AND 24 TO FIND NO.1 PER NO 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER NO 1002002(BLACK POLYURETHANE FOAM) FLUSH TO .010 BELOW PERIPHERAL SURFACES OF TRAY FRAME
7. SEE CONDUCTOR TERMINATION CHART FOR FIND NO.19, OR FIND NO. 28.
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO.16 DURING ASSEMBLY TO FIND NO.1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NO.S 16 AND 17 TO FIND NO.1 TO BE 5.0-5.5 IN.LB:
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER NO 1002005 ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER NO 1002071 ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS
12. PROCURE PER PS 1007141.
13. BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER NO 1002237.

| QUANTITY REQUIRED | | | | | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|---|---|---|---|
| | | | | | 1008620 | WIRING LIST A A | 33 |
| | | – | 1 | | 1008619 | WIRING HARNESS D | 32 |
| | | – | 1 | | 1008618 | WIRING HARNESS C | 31 |
| | | – | 1 | | 1008617 | WIRING HARNESS B | 30 |
| | | – | 1 | | 1008616 | WIRING HARNESS A | 29 |
| | | – | 1 | | 1007586-011 | BUFFER RESISTOR ASSY | 28 |
| | | - | X | | 1009561 | WIRING DIAGRAM | REF |
| | | X | – | | 1009551 | WIRING DIAGRAM | REF |
| | | – | 1 | | 1010821-1 | CONNECTOR, RECEPTACLE | 27 |
| | | 1 | 1 | | 1008551 | GASKET, CONNECTOR TRAY | 26 |
| | | 1 | 1 | | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| | | 1 | – | | 1015741 | WIRE LIST A A | 24 |
| | | 1 | – | | 1015740 | WIRING HARNESS D | 23 |
| | | 1 | – | | 1015739 | WIRING HARNESS C | 22 |
| | | 1 | – | | 1015738 | WIRING HARNESS B | 21 |
| | | 1 | – | | 1015737 | WIRING HARNESS A | 20 |
| | | 1 | – | | 1007088 | BUFFER RESISTOR ASSY | 19 |
| | | 2 | 2 | | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| | | 2 | 2 | | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| | | 3 | 3 | | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| | | 30 | 30 | | MS17423 | PIN, SPRING | 15 |
| | | 30 | 30 | | 1004207 | DRIVE CYLINDER | 14 |
| | | 1 | 1 | | 1008099-2 | WASHER | 13 |
| | | 60 | 60 | | 1004206 | WASHER, THRUST | 12 |
| | | 1 | 1 | | 1008098 | SCREW, SOCKET HEAD | 11 |
| | | 30 | 30 | | 1008172 | SCREW, JACK | 10 |
| | | 1 | 1 | | 1001317 | RETAINER, JACK SCREW | 9 |
| | | 2 | 2 | | 1010620-5 | PIN, GUIDE | 8 |
| | | 20 | 20 | | 1010620-4 | PIN, GUIDE | 7 |
| | | 1 | – | | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| | | 84 | 84 | | 1010383-1 | INSULATOR, WRAPOST, MALE | 5 |
| | | 84 | 84 | | 1010382-1 | CONTACT BLADE EDGE CONNECTOR | 4 |
| | | 149 | 149 | | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| | | 149 | 149 | | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| | | 1 | 1 | | 1008101 | FRAME | 1 |

| 021 | 011 | EFFEC. T...TY |
|---|---|---|

LIST OF MATERIALS

| 1007571 | | |
|---|---|---|
| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ±.02 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
Contract NAS 9-895
DRAWN R.L. Gray DATE 5-27-65
CHECKED Robert Klein DATE 6-2-65
APPROVED [illegible] DATE 6-2-65
APPROVED [illegible] DATE 6-2-65
NASA APPROVAL W.J. Kelly 6 June 65
MIT APPROVAL W.R. Taylor

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME ASSEMBLY
TRAY 1

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1007531
SCALE 1/1 | WT | SHEET 1 of 2

1007531 E

| REVISIONS | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPROVAL |
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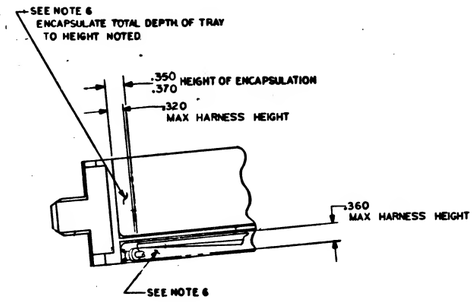
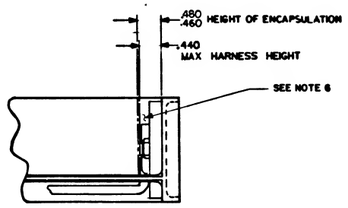
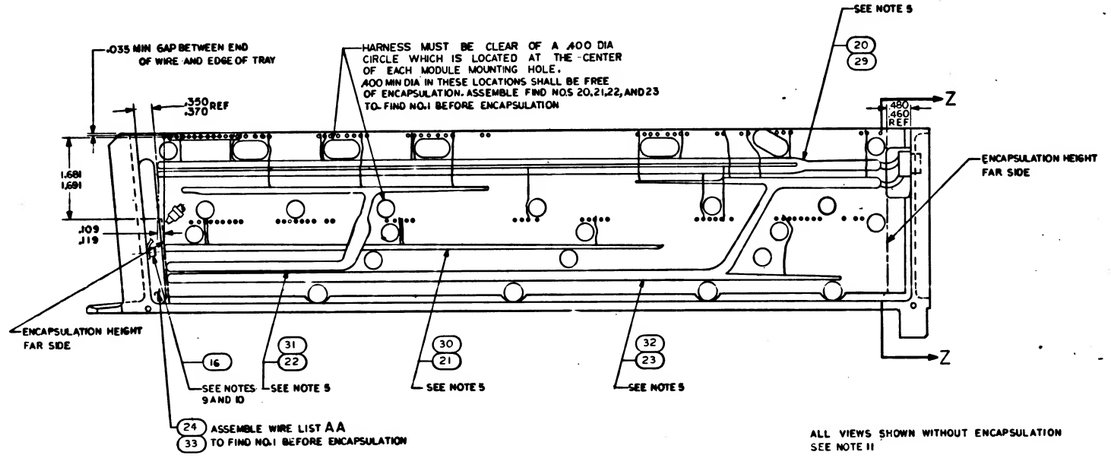
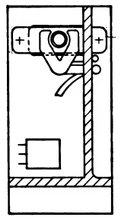
| E | REVISED PER TDRR 15150 | 6/5/67 | WK |




ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| | | LIST OF MATERIALS | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± ___ DECIMALS ___ ANGLES ±___
DO NOT SCALE THIS DRAWING
MATERIAL ___
HEAT TREATMENT ___
FINAL FINISH ___

M I T INSTRUMENTATION LAB Cambridge, Mass.
DRAWN R.J.Sox DATE SEP 66
CHECKED Ted Spring Gaetz
APPROVAL [illegible]
NASA APPROVAL W.J. Klein 11 Dec 67
MIT APPROVAL [illegible]

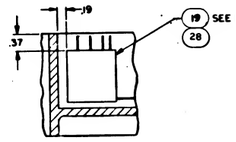
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME ASSEMBLY
TRAY 1

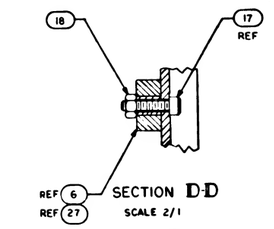
CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1007531
SCALE 1/1 | WT | SHEET 2 OF 2

1007531 E

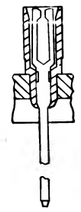
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG NO | DATE | APPD |
| D | | [illegible] | | | |
| E | | REVISED PER TORR 15150 | | | |
| F | | REVISED PER TORR 15948 | | 8 FEB 65 | |



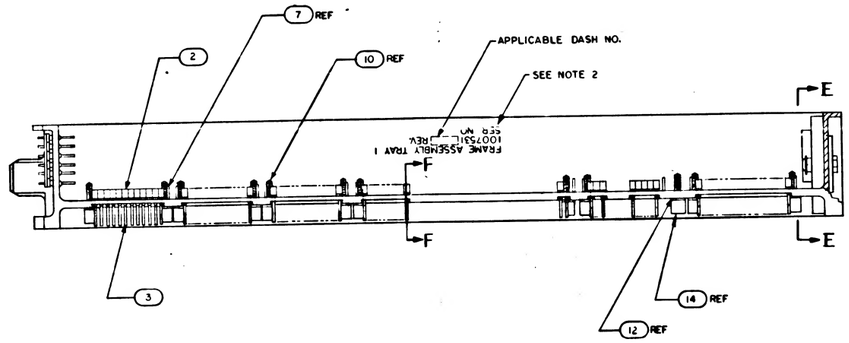

PARTIAL SECTION E-E

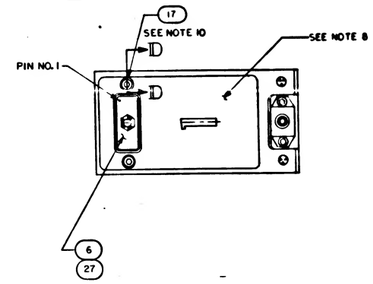



SECTION D-D
SCALE 2/1

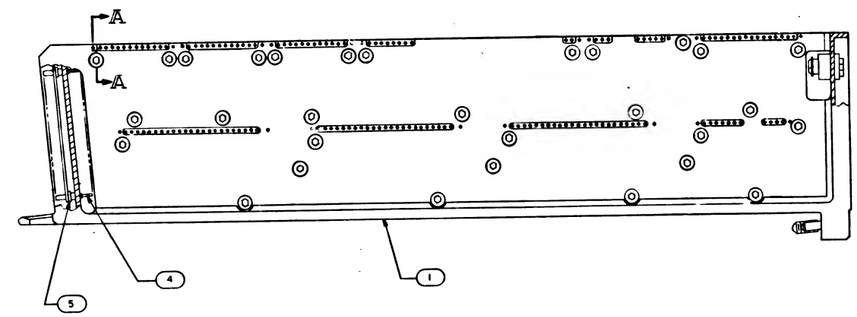


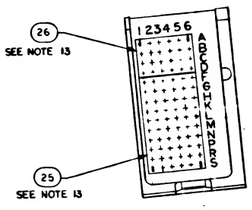
PARTIAL SECTION F-F
149 PLACES

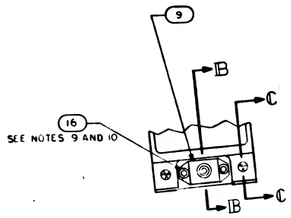


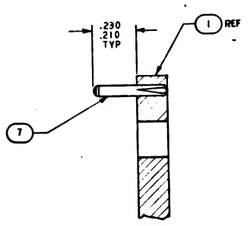




D REPLACES WORD DWG REV C

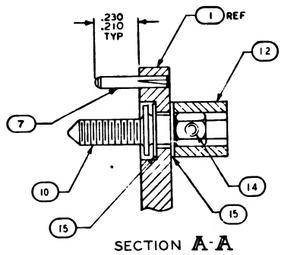


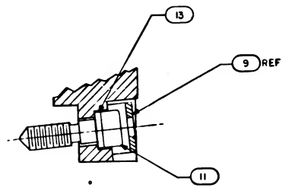




SECTION A-A
SCALE 4/1
-011 CONFIGURATION

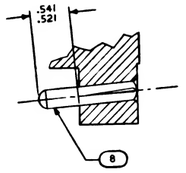



SECTION A-A
SCALE 4/1
-021 CONFIGURATION

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45A1E7 | 45A1J1-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45A1E11 | 45A1J1-18 |




SECTION B-B
SCALE 2/1




SECTION C-C
SCALE 2/1

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER ND 1002019 BLACK, 100/140 HIGH & SERIALIZE PER ND 1002023.
3. BOND FIND NO 19 TO FIND NO.1 PER ND 1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686.
4. ASSEMBLE FIND NUMBERS 2,3,4 AND 5 PER ND 1002136
5. BOND FIND NOS 20,21,22,23 AND 24 TO FIND NO.1 PER ND 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER ND 1002002 (BLACK POLYURETHANE FOAM) FLUSH TO .010 BELOW PERIPHERAL SURFACES OF TRAY FRAME.
7. SEE CONDUCTOR TERMINATION CHART FOR FIND NO. 19, OR FIND NO. 28.
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR. EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO. 16 DURING ASSEMBLY TO FIND NO.1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NOS 16 AND 17 TO FIND NO.1 TO BE 5.0–5.5 IN.LB
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER ND 1002005. ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER ND 1002071. ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS.
12. PROCURE PER PS 1007141.
13. BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER ND 1002237.

| QUANTITY REQUIRED | | EFFECTIVITY | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|---|---|
| - | 1 | | 1008620 | WIRING LIST A A | 33 |
| - | 1 | | 1008619 | WIRING HARNESS D | 32 |
| - | 1 | | 1008618 | WIRING HARNESS C | 31 |
| - | 1 | | 1008617 | WIRING HARNESS B | 30 |
| - | 1 | | 1007516 | WIRING HARNESS A | 29 |
| - | 1 | | 1007586 011 | BUFFER RESISTOR ASSY | 28 |
| - | X | | 1009561 | WIRING DIAGRAM | REF |
| X | - | | 1009551 | WIRING DIAGRAM | REF |
| - | 1 | | 1010821-1 | CONNECTOR, RECEPTACLE | 27 |
| 1 | 1 | | 1008551 | GASKET, CONNECTOR TRAY | 26 |
| 1 | 1 | | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| 1 | | | 1015741 | WIRE LIST A A | 24 |
| 1 | - | | 1015740 | WIRING HARNESS D | 23 |
| 1 | - | | 1015739 | WIRING HARNESS C | 22 |
| 1 | - | | 1015738 | WIRING HARNESS B | 21 |
| 1 | - | | 1015737 | WIRING HARNESS A | 20 |
| 1 | - | | 1007088 | BUFFER RESISTOR ASSY | 19 |
| 2 | 2 | | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| 2 | 2 | | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| 3 | 3 | | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| 30 | - | | MS171433 | PIN, SPRING | 15 |
| 30 | - | | 1004207 | DRIVE CYLINDER | 14 |
| 1 | 1 | | 1008099-2 | WASHER | 13 |
| 60 | - | | 1004206 | WASHER, THRUST | 12 |
| 1 | 1 | | 1008098 | SCREW, SOCKET HEAD | 11 |
| 30 | - | | 1008172 | SCREW, JACK | 10 |
| 1 | 1 | | 1011317 | RETAINER, JACK SCREW | 9 |
| 2 | 2 | | 1010620-5 | PIN, GUIDE | 8 |
| 20 | 20 | | 1010620-4 | PIN, GUIDE | 7 |
| 1 | - | | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| 84 | 84 | | 1010383-1 | INSULATOR, WRAPOST, MALE | 5 |
| 84 | 84 | | 1010382-1 | CONTACT, BLADE EDGE CONNECTOR | 4 |
| 149 | 149 | | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| 149 | 149 | | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| 1 | 1 | | 1008101 | FRAME | 1 |
| | 021 | 011 | | LIST OF MATERIALS | |

| | | |
|---|---|---|
| 1007531 | NEXT ASSY | USED ON |
| | APPLICATION | |
| THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES | | APPLICABLE DASH NO |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS XX ±.02 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN [illegible] DATE SEP 64
CHECKED [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

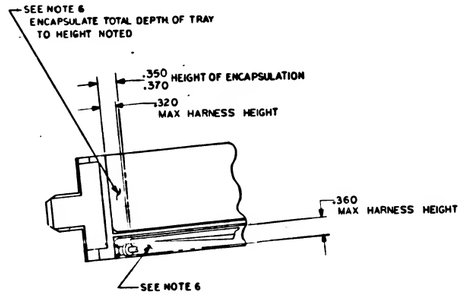
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

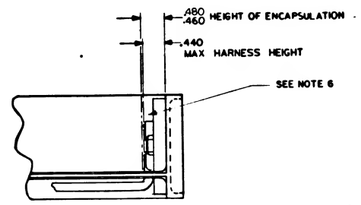
FRAME ASSEMBLY
TRAY 1

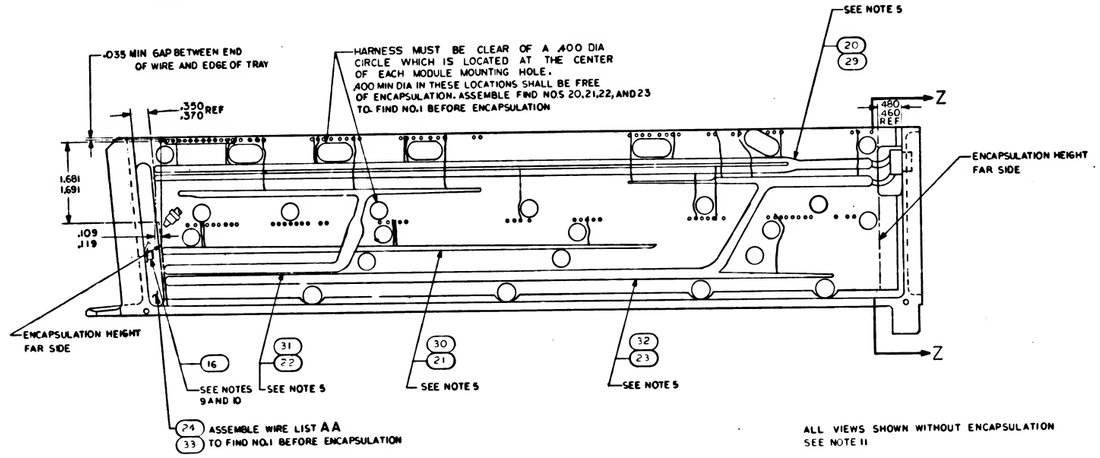
CODE IDENT NO | SIZE E | NASA DRAWING NO 1007531
SCALE 1/1 | WT | SHEET 1 of 2

1007531 F

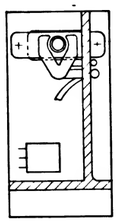
| REVISIONS | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPROVAL |
| D | RELEASED WORD DWG REV C PER TDRR 13739 | 6/8/67 | |
| E | REVISED PER TDRR 15150 | 2 FEB 68 | |
| F | REVISED PER TDRR 15948 | 2 FEB 68 | |




ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY REQD | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|
| LIST OF MATERIALS | | | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± —— DECIMALS ± —— ANGLES ± ——
DO NOT SCALE THIS DRAWING
MATERIAL ——
HEAT TREATMENT ——
FINAL FINISH ——

M I T INSTRUMENTATION LAB Cambridge Mass.
DRAWN R.J. Fox 8 SEP 66
CHECKED Stan Goetz
APPROVAL
M.I.T. APPROVAL

MANNED SPACECRAFT CENTER HOUSTON TEXAS

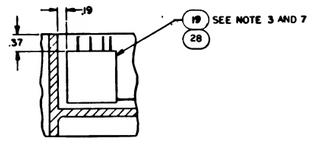
FRAME ASSEMBLY
TRAY 1

NASA APPROVAL
MIT APPROVAL

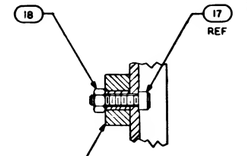
CODE IDENT NO | SIZE E | NASA DRAWING NO 1007531
SCALE 1/1 | WT | SHEET 2 OF 2

1007531 F

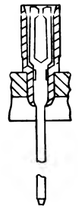
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG NO. | DATE | APPD |
| - | | | | | |
| E | | REVISED PER TDRR 15150 | | | |
| - | | REVISED PER TDRR 15948 | | | |
| G | | REVISED PER TDRR 16267 | | | |



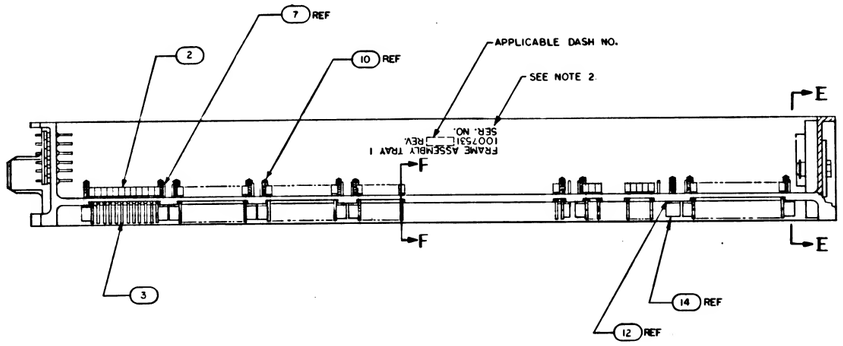

PARTIAL SECTION E-E

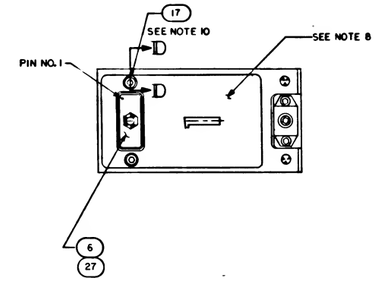



SECTION D-D
SCALE 2/1

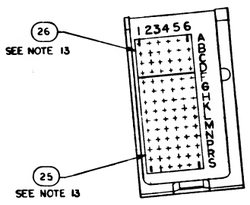


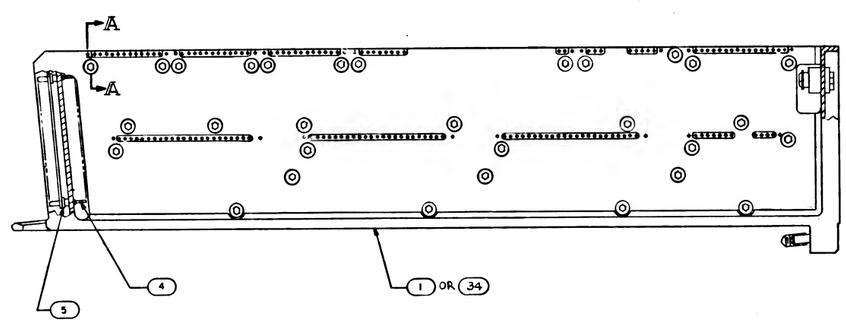
PARTIAL SECTION F-F
149 PLACES

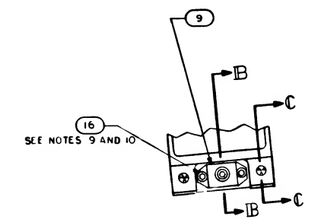


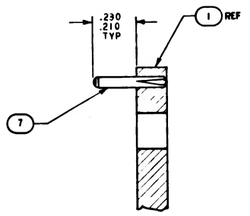




Ⓓ REPLACES WORD DWG REV C

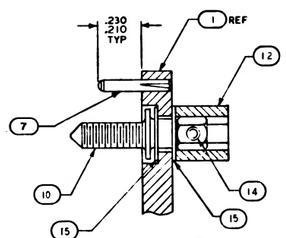


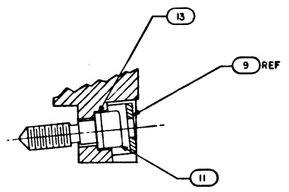



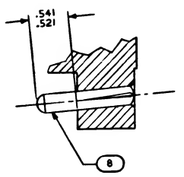

SECTION A-A
SCALE 4/1
-011 CONFIGURATION




SECTION A-A
SCALE 4/1
-021 CONFIGURATION




SECTION B-B
SCALE 2/1




SECTION C-C
SCALE 2/1

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45A1E7 | 45A1J1-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45A1E11 | 45A1J1-18 |

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER ND 1002019 BLACK, 100/140 HIGH & SERIALIZE PER ND 1002023.
3. BOND FIND NO 19 TO FIND NO.1 PER ND1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686.
4. ASSEMBLE FIND NUMBERS 2,3,4 AND 5 PER ND1002136
5. BOND FIND NO'S 20,21,22,23 AND 24 TO FIND NO.1 PER ND 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER ND 1002002 (BLACK POLYURETHANE FOAM) FLUSH TO .010 BELOW PERIPHERAL SURFACES OF TRAY FRAME.
7. SEE CONDUCTOR TERMINATION CHART FOR FIND NO.19, OR FIND NO. 28.
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR. EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO.16 DURING ASSEMBLY TO FIND NO.1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NO'S 16 AND 17 TO FIND NO.1 TO BE 5.0-5.5 IN.LB
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER ND 1002005. ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER ND 1002071. ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS
12. PROCURE PER PS 1007141.
13. BOND FIND NO'S. 25 AND 26 TO FIND NO. 5 PER ND 1002237.

| QUANTITY REQUIRED | EFFECTIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|---|
| | | | LIST OF MATERIALS | |
| - | 1 | 1008521 | FRAME | 34 |
| - | 1 | 1008620 | WIRING LIST A A | 33 |
| - | 1 | 1008619 | WIRING HARNESS D | 32 |
| - | 1 | 1008618 | WIRING HARNESS C | 31 |
| - | 1 | 1008617 | WIRING HARNESS B | 30 |
| - | 1 | 1008616 | WIRING HARNESS A | 29 |
| - | 1 | 1007586-011 | BUFFER RESISTOR ASSY | 28 |
| - | X | 1009561 | WIRING DIAGRAM | REF |
| X | - | 1009551 | WIRING DIAGRAM | REF |
| - | 1 | 1010821-1 | CONNECTOR, RECEPTACLE | 27 |
| 1 | 1 | 1008551 | GASKET, CONNECTOR TRAY | 26 |
| 1 | 1 | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| 1 | - | 1015741 | WIRE LIST A A | 24 |
| 1 | - | 1015740 | WIRING HARNESS D | 23 |
| 1 | - | 1015739 | WIRING HARNESS C | 22 |
| 1 | - | 1015738 | WIRING HARNESS B | 21 |
| 1 | - | 1015737 | WIRING HARNESS A | 20 |
| 1 | - | 1007088 | BUFFER RESISTOR ASSY | 19 |
| 2 | 2 | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| 2 | 2 | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| 3 | 3 | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| 30 | - | MS171433 | PIN, SPRING | 15 |
| 30 | - | 1004207 | DRIVE CYLINDER | 14 |
| 1 | 1 | 1008099-2 | WASHER | 13 |
| 60 | - | 1004206 | WASHER, THRUST | 12 |
| 1 | 1 | 1008098 | SCREW, SOCKET HEAD | 11 |
| 30 | - | 1008172 | SCREW, JACK | 10 |
| 1 | 1 | 1001317 | RETAINER, JACK SCREW | 9 |
| 2 | 2 | 1010620-5 | PIN, GUIDE | 8 |
| 20 | 20 | 1010620-4 | PIN, GUIDE | 7 |
| 1 | - | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| 84 | 84 | 1010383-1 | INSULATOR, WRAPOST, MALE | 5 |
| 84 | 84 | 1010382-1 | CONTACT, BLADE EDGE CONNECTOR | 4 |
| 149 | 149 | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| 149 | 149 | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| 1 | - | 1008101 | FRAME | 1 |
| | 021 011 | | NOMENCLATURE OR DESCRIPTION | FIND NO |

| | | |
|---|---|---|
| 1007571 | | |
| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ±.02 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB Cambridge, Mass. Contract NAS9-153

DRAWN R.J. Fox DATE 28 SEP 68
CHECKED R.E. Kuck G.A.T.A.
APPROVED [illegible] DATE 9/28/68
APPROVED [illegible] DATE 9/28/68
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

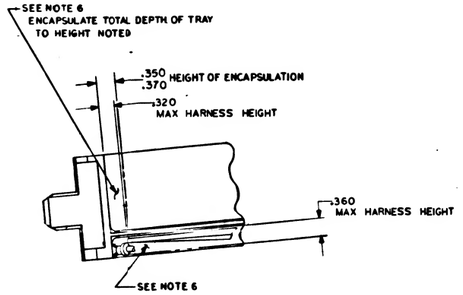
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

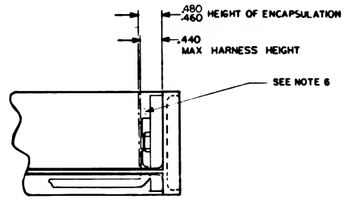
FRAME ASSEMBLY
TRAY 1

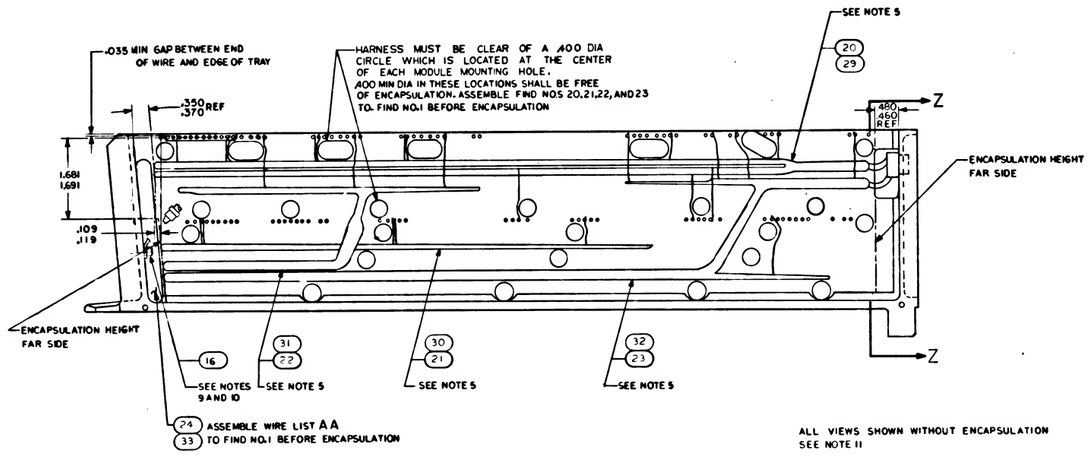
CODE IDENT NO | SIZE E | NASA DRAWING NO 1007531
SCALE 1/1 | WT | SHEET 1 of 2

1007531G

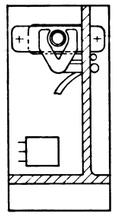
| SYM | REVISIONS DESCRIPTION | DATE | APPROVED |
|---|---|---|---|
| D | REPLACES WORD DWG REV C PER TDRR 13779 | 11/6 | |
| E | REVISED PER TDRR 15150 | 12/5/67 | |
| F | REVISED PER TDRR 15948 | FEB 68 | |
| G | REVISED PER TDRR 16267 | 15 FEB 68 | |




ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± —— DECIMALS ± —— ANGLES ± ——
DO NOT SCALE THIS DRAWING
MATERIAL ——
HEAT TREATMENT ——
FINAL FINISH ——

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN R.J. Fox DATE 3/29/66
CHECKED [illegible] 3/29/66
APPROVAL [illegible] 3/29/66
M.I.T. APPROVAL [illegible]

NASA APPROVAL W.J. Kehoe 11/4/64
MIT APPROVAL [illegible]

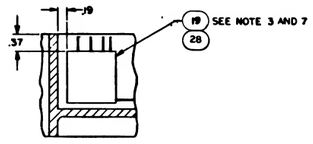
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

FRAME ASSEMBLY
TRAY 1

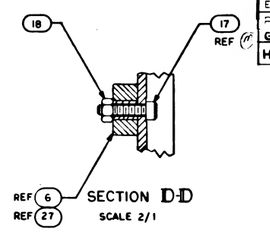
CODE IDENT NO. | SIZE E | NASA DRAWING NO 1007531
SCALE 1/1 | WT | SHEET 2 OF 2

1007531 G

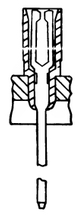
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG. NO. | DATE | APPD |
| D | | REPLACES WORD DWG REV C PER TDRR 13744 | | | |
| E | | REVISED PER TDRR 15150 | | | |
| F | | REVISED PER TDRR 15948 | | | |
| G | | REVISED PER TDRR 16267 | | | |
| H | | REVISED PER TDRR 17613 | | | |



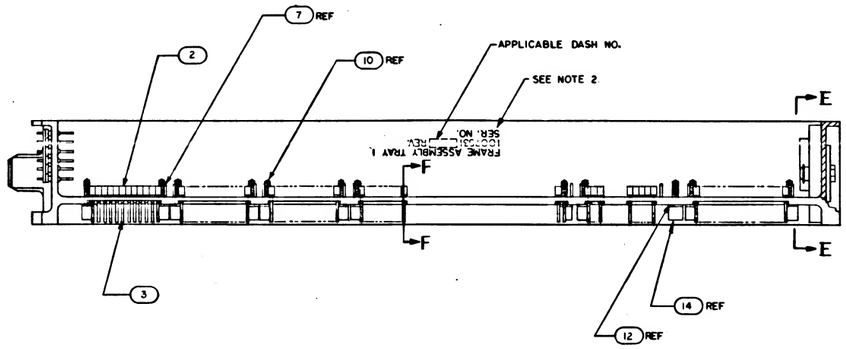

PARTIAL SECTION E-E

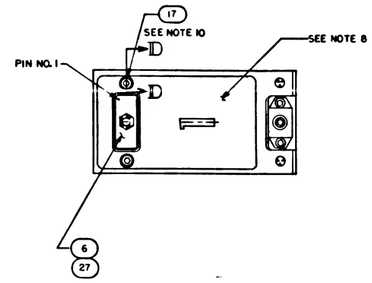



SECTION D-D
SCALE 2/1

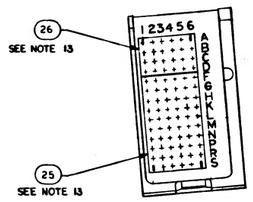


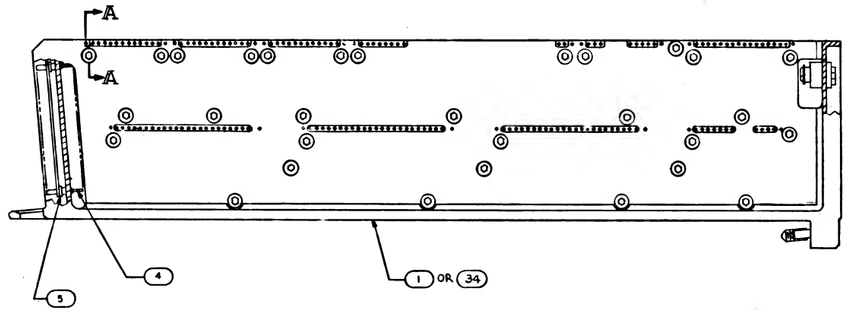
PARTIAL SECTION F-F
149 PLACES

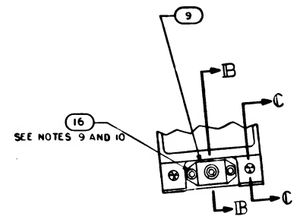


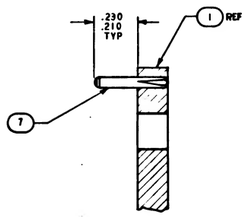




Ⓓ REPLACES WORD DWG REV C

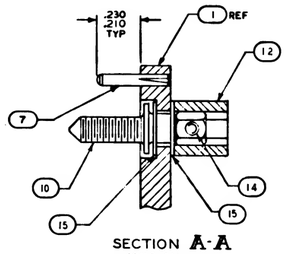


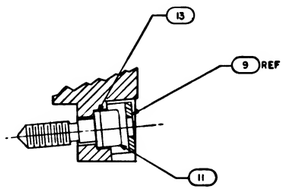



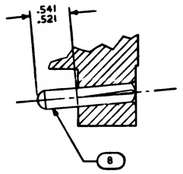

SECTION A-A
SCALE 4/1
-011 CONFIGURATION




SECTION A-A
SCALE 4/1
-021 CONFIGURATION




SECTION B-B
SCALE 2/1




SECTION C-C
SCALE 2/1

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45A1E7 | 45A1J1-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45A1E11 | 45A1J1-18 |

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER ND 1002019 BLACK, 100/140 HIGH & SERIALIZE PER ND 1002023.
3. BOND FIND NO 19 TO FIND NO.1 PER ND 1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686.
4. ASSEMBLE FIND NUMBERS 2,3,4 AND 5 PER ND 1002136
5. BOND FIND NO'S 20,21,22,23 AND 24 TO FIND NO.1 PER ND 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER ND 1002002 (BLACK POLYURETHANE FOAM) .010 ABOVE TO .010 BELOW PERIPHERAL SURFACES OF TRAY FRAME UNLESS OTHERWISE SPECIFIED.
7. SEE CONDUCTOR TERMINATION CHART FOR FIND NO.19, OR FIND NO. 28.
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE.
9. COAT THREADS OF FIND NO.16 DURING ASSEMBLY TO FIND NO.1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NO.S 16 AND 17 TO FIND NO.1 TO BE 5.0-5.5 IN.LB.
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER ND 1002005 ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER ND 1002071 ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS
12. PROCURE PER PS 1007141.
13. BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER ND 1002237.

| QUANTITY REQUIRED | | EFFECTIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|---|---|
| – | 1 | | 1008521 | FRAME | 34 |
| – | 1 | | 1008620 | WIRING LIST A A | 33 |
| – | 1 | | 1008619 | WIRING HARNESS D | 32 |
| – | 1 | | 1008618 | WIRING HARNESS C | 31 |
| – | 1 | | 1008617 | WIRING HARNESS B | 30 |
| – | 1 | | 1008616 | WIRING HARNESS A | 29 |
| – | 1 | | 1007586-011 | BUFFER RESISTOR ASSY | 28 |
| – | X | | 1009561 | WIRING DIAGRAM | REF |
| X | – | | 1009551 | WIRING DIAGRAM | REF |
| – | 1 | | 1010821-1 | CONNECTOR, RECEPTACLE | 27 |
| 1 | 1 | | 1008551 | GASKET, CONNECTOR TRAY | 26 |
| 1 | 1 | | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| 1 | – | | 1015741 | WIRE LIST A A | 24 |
| 1 | – | | 1015740 | WIRING HARNESS D | 23 |
| 1 | – | | 1015739 | WIRING HARNESS C | 22 |
| 1 | – | | 1015738 | WIRING HARNESS B | 21 |
| 1 | – | | 1015737 | WIRING HARNESS A | 20 |
| 1 | – | | 1007088 | BUFFER RESISTOR ASSY | 19 |
| 2 | 2 | | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| 2 | 2 | | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| 3 | 3 | | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| 30 | – | | MS171423 | PIN, SPRING | 15 |
| 30 | – | | 1004207 | DRIVE CYLINDER | 14 |
| 1 | 1 | | 1008099-2 | WASHER | 13 |
| 60 | – | | 1004206 | WASHER, THRUST | 12 |
| 1 | 1 | | 1008098 | SCREW, SOCKET HEAD | 11 |
| 30 | – | | 1008172 | SCREW, JACK | 10 |
| 1 | 1 | | 1001317 | RETAINER, JACK SCREW | 9 |
| 2 | 2 | | 1010620-5 | PIN, GUIDE | 8 |
| 20 | 20 | | 1010620-4 | PIN, GUIDE | 7 |
| 1 | – | | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| 84 | 84 | | 1010383-1 | INSULATOR, WRAPOST, MALE | 5 |
| 84 | 84 | | 1010382-1 | CONTACT BLADE EDGE CONNECTOR | 4 |
| 149 | 149 | | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| 149 | 149 | | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| 1 | – | | 1008101 | FRAME | 1 |

LIST OF MATERIALS

1007571
NEXT ASSY USED ON APPLICATION
APPLICABLE DASH NO.
THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ±.02 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.
DRAWN DL Tate DATE SEP 68
CHECKED Eric Klumb Gaetjen
ENGR Zachary Jacobs
APPROVED [illegible]

NASA APPROVAL W J Kelly 11-4-68
MIT APPROVAL W K Hoyt

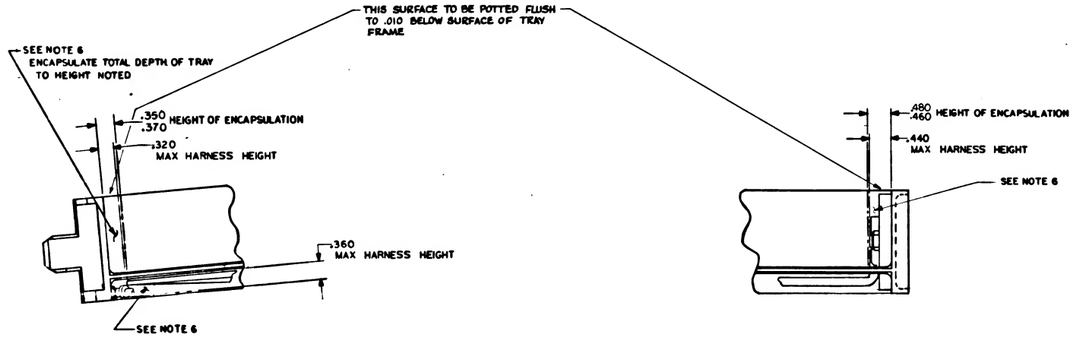
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

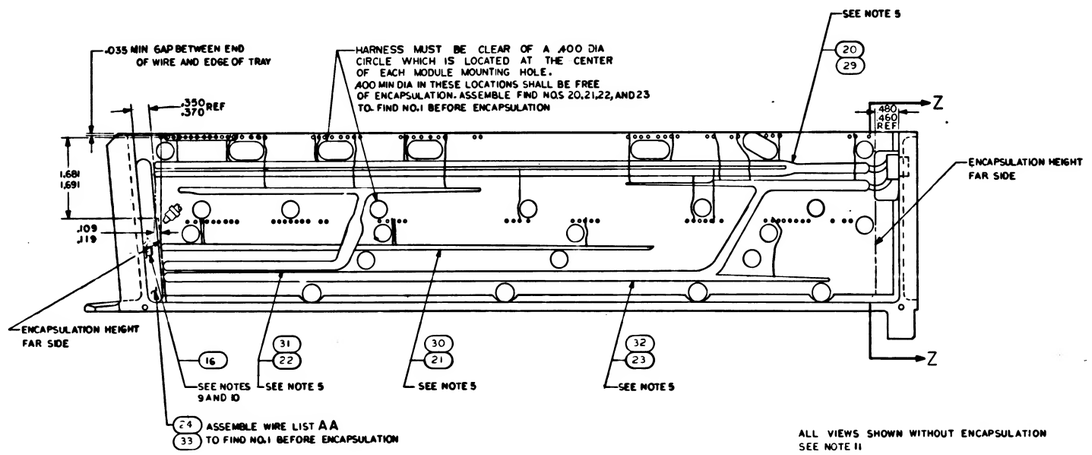
# FRAME ASSEMBLY TRAY 1

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1007531
SCALE 1/1 | WT | SHEET 1 OF 2

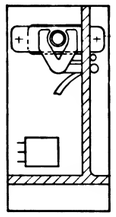
1007531 H

| ZONE | REVISIONS DESCRIPTION | DATE | APPROVED |
|---|---|---|---|
| D | PER TDRR 13797 | 11/6/67 | |
| E | REVISED PER TDRR 15150 | | |
| F | REVISED PER TDRR 15948 | | |
| G | REVISED PER TDRR 16267 | | |
| H | REVISED PER TDRR 17613 | | |


THIS SURFACE TO BE POTTED FLUSH TO .010 BELOW SURFACE OF TRAY FRAME
SEE NOTE 6 ENCAPSULATE TOTAL DEPTH OF TRAY TO HEIGHT NOTED
.350 .370 HEIGHT OF ENCAPSULATION
.320 MAX HARNESS HEIGHT
.360 MAX HARNESS HEIGHT
SEE NOTE 6
.480 .460 HEIGHT OF ENCAPSULATION
.440 MAX HARNESS HEIGHT
SEE NOTE 6


.035 MIN GAP BETWEEN END OF WIRE AND EDGE OF TRAY
HARNESS MUST BE CLEAR OF A .400 DIA CIRCLE WHICH IS LOCATED AT THE CENTER OF EACH MODULE MOUNTING HOLE. .400 MIN DIA IN THESE LOCATIONS SHALL BE FREE OF ENCAPSULATION. ASSEMBLE FIND NOS 20,21,22, AND 23 TO FIND NO.1 BEFORE ENCAPSULATION
SEE NOTE 5
20
29
.350 .370 REF
.480 .460 REF
Z
Z
1.681 1.691
.109 .119
ENCAPSULATION HEIGHT FAR SIDE
ENCAPSULATION HEIGHT FAR SIDE
16
SEE NOTES 9 AND 10
31
22
SEE NOTE 5
30
21
SEE NOTE 5
32
23
SEE NOTE 5
24
33
ASSEMBLE WIRE LIST AA TO FIND NO.1 BEFORE ENCAPSULATION

ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T INSTRUMENTATION LAB Cambridge, Mass.
DRAWN R.J.Sox SEP 68
CHECKED Gene Young 9/27/68
ENGINEERING [illegible] 9/27/68
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

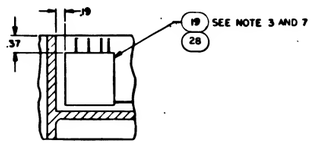
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME ASSEMBLY
TRAY 1

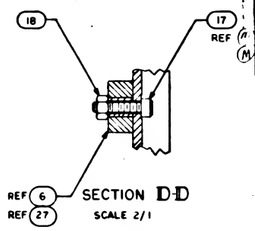
CODE IDENT NO. | SIZE E | NASA DRAWING NO 1007531
SCALE 1/1 | WT | SHEET 2 OF 2

1007531 H

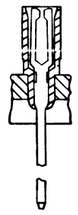
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG NO | DATE | APPD |
| - | | PER ECR [illegible] | | [illegible] | [illegible] |
| E | | REVISED PER TDRR 15150 | | [illegible] | [illegible] |
| F | | REVISED PER TDRR 15948 | | [illegible] | [illegible] |
| G | | REVISED PER TDRR 16267 | | [illegible] | [illegible] |
| H | | REVISED PER TDRR 17613 | | [illegible] | [illegible] |
| J | | REVISED PER TDRR 18690 | | [illegible] | [illegible] |



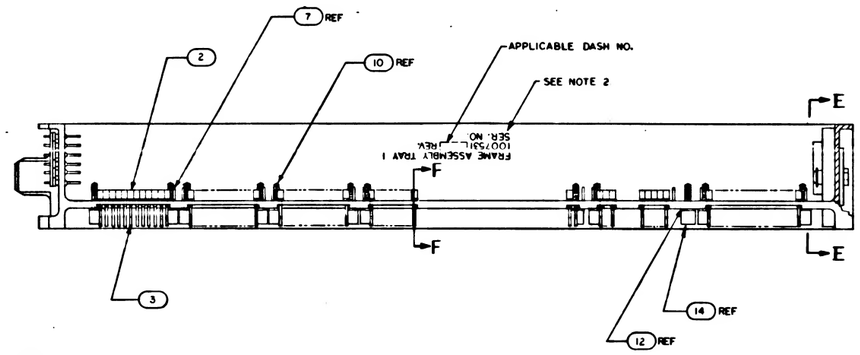

PARTIAL SECTION E-E

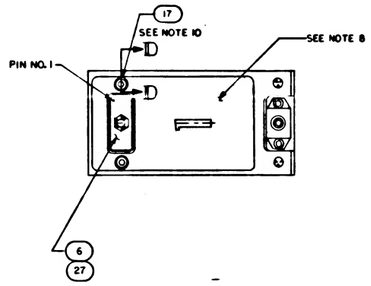



SECTION D-D
SCALE 2/1

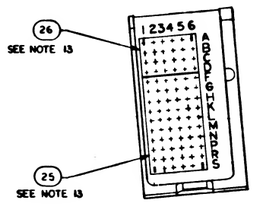


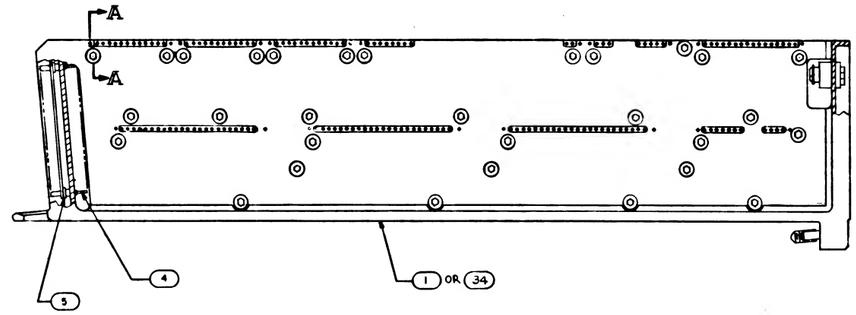
PARTIAL SECTION F-F
149 PLACES

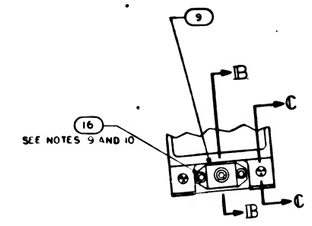


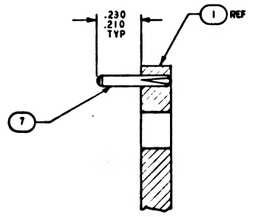




Ⓓ REPLACES WORD DWG REV C

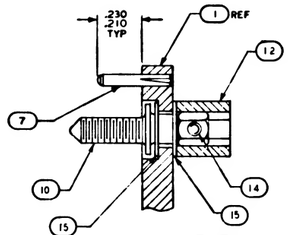


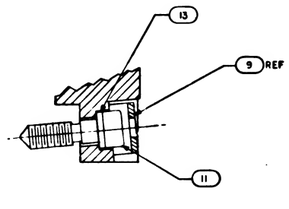




SECTION A-A
SCALE 4/1
-011 CONFIGURATION

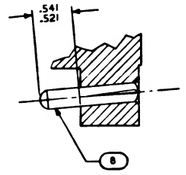



SECTION A-A
SCALE 4/1
-021 CONFIGURATION

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45AIE7 | 45AIJ1-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45AIE11 | 45AIJ1-18 |




SECTION B-B
SCALE 2/1




SECTION C-C
SCALE 2/1

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER ND 1002019 BLACK, .100/.140 HIGH ℄ SERIALIZE PER ND 1002023.
3. BOND FIND NO 19 TO FIND NO.1 PER ND1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686.
4. ASSEMBLE FIND NUMBERS 2,3,4 AND 5 PER ND1002136.
5. BOND FIND NO'S 20,21,22,23 AND 24 TO FIND NO.1 PER ND 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER ND 1002002 (BLACK POLYURETHANE FOAM) .010 ABOVE TO .010 BELOW PERIPHERAL SURFACES OF TRAY FRAME UNLESS OTHERWISE SPECIFIED.
7. SEE CONDUCTOR TERMINATION CHART FOR FIND NO 19, OR FIND NO. 28.
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO.16 DURING ASSEMBLY TO FIND NO.1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NOS 16 AND 17 TO FIND NO.1 TO BE 5.0-5.5 IN.LB
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER ND 1002005. ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER ND 1002071 ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS
12. PROCURE PER PS 1007141.
13. BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER ND 1002237.

| QTY REQ | | EFFECTIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|---|---|
| - | 1 | | 1008521 | FRAME | 34 |
| - | 1 | | 1008620 | WIRING LIST A A | 33 |
| - | 1 | | 1008619 | WIRING HARNESS D | 32 |
| - | 1 | | 1008618 | WIRING HARNESS C | 31 |
| - | 1 | | 1008617 | WIRING HARNESS B | 30 |
| - | 1 | | 1008616 | WIRING HARNESS A | 29 |
| - | 1 | | 1007586-011 | BUFFER RESISTOR ASSY | 28 |
| - | X | | 1009561 | WIRING DIAGRAM | REF |
| - | X | | 1009551 | WIRING DIAGRAM | REF |
| - | 1 | | 1010821-1 | CONNECTOR, RECEPTACLE | 27 |
| 1 | 1 | | 1008551 | GASKET, CONNECTOR TRAY | 26 |
| 1 | 1 | | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| 1 | - | | 1015741 | WIRE LIST A A | 24 |
| 1 | - | | 1015740 | WIRING HARNESS D | 23 |
| 1 | - | | 1015739 | WIRING HARNESS C | 22 |
| 1 | - | | 1015738 | WIRING HARNESS B | 21 |
| 1 | - | | 1015737 | WIRING HARNESS A | 20 |
| 1 | - | | 1007088 | BUFFER RESISTOR ASSY | 19 |
| 2 | 2 | | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| 2 | 2 | | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| 3 | 3 | | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| 30 | - | | MS171423 | PIN, SPRING | 15 |
| 30 | - | | 1004207 | DRIVE CYLINDER | 14 |
| 1 | 1 | | 1008099-2 | WASHER | 13 |
| 60 | - | | 1004206 | WASHER, THRUST | 12 |
| 1 | 1 | | 1008098 | SCREW, SOCKET HEAD | 11 |
| 30 | - | | 1008172 | SCREW, JACK | 10 |
| 1 | 1 | | 1001317 | RETAINER, JACK SCREW | 9 |
| 2 | 2 | | 1010620-5 | PIN, GUIDE | 8 |
| 20 | 20 | | MS 24356-604 | PIN, GUIDE | 7 |
| 1 | - | | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| 84 | 84 | | 1010383-1 | INSULATOR, WRAPOST, MALE | 5 |
| 84 | 84 | | 1010382-1 | CONTACT, BLADE EDGE CONNECTOR | 4 |
| 149 | 149 | | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| 149 | 149 | | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| 1 | - | | 1008101 | FRAME | 1 |

QUANTITY REQUIRED — EFFECTIVITY — PART OR IDENTIFYING NO. — NOMENCLATURE OR DESCRIPTION — FIND NO

LIST OF MATERIALS

| | | |
|---|---|---|
| | | 100-571 |
| NEXT ASSY | USED ON | APPLICABLE DASH NO |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ± .02 ANGLES ± 1°
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

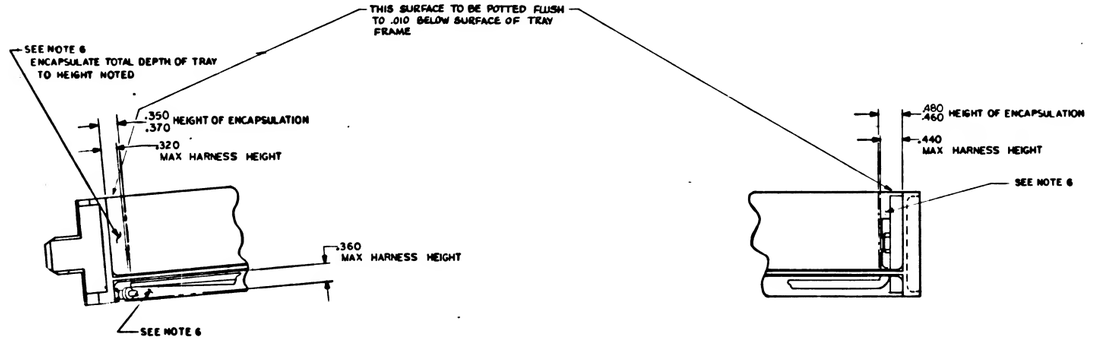
M I T INSTRUMENTATION LAB Cambridge, Mass. (Contract NAS 9-997)
DRAWN R.J. Fox 9/27/66
CHECKED [illegible]
APPROVED [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

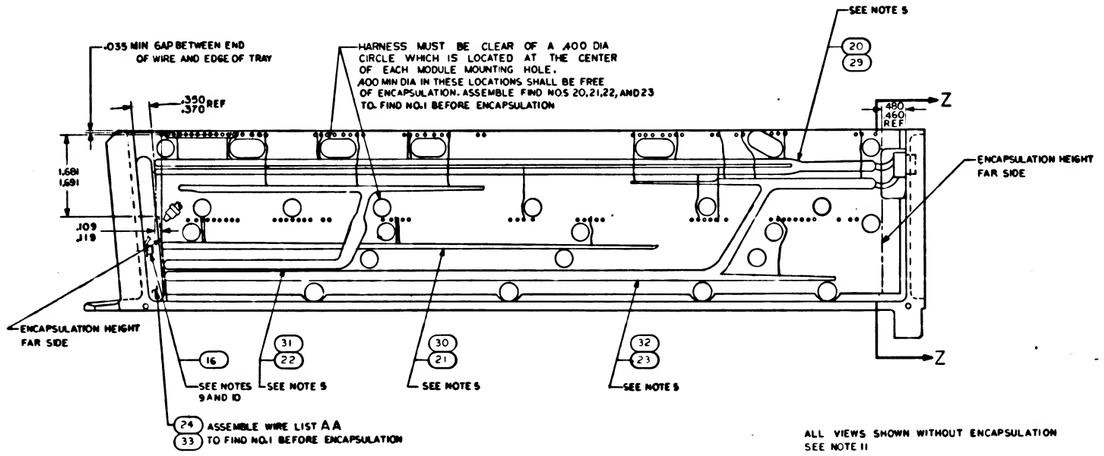
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

# FRAME ASSEMBLY TRAY 1

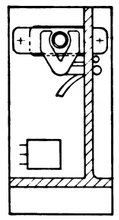
CODE IDENT NO. — SIZE E — NASA DRAWING NO. 1007531
SCALE 1/1 — WT — SHEET 1 OF 2

| REVISIONS | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPROVED |
| D | REPLACES WORD DWG REV C PER TDRR 13779 | 11/6/64 | WH |
| E | REVISED PER TDRR 15150 | 2 DEC 64 | WH |
| F | REVISED PER TDRR 15948 | 4 FEB 65 | WH |
| G | REVISED PER TDRR 16267 | 15 FEB 65 | WH |
| H | REVISED PER TDRR 17613 | 28 JUNE 65 | WH |
| J | REVISED PER TDRR 18690. | 4 NOV 65 | WH |


THIS SURFACE TO BE POTTED FLUSH TO .010 BELOW SURFACE OF TRAY FRAME
SEE NOTE 6 ENCAPSULATE TOTAL DEPTH OF TRAY TO HEIGHT NOTED
.350 .370 HEIGHT OF ENCAPSULATION
.320 MAX HARNESS HEIGHT
.360 MAX HARNESS HEIGHT
SEE NOTE 6
.480 .460 HEIGHT OF ENCAPSULATION
.440 MAX HARNESS HEIGHT
SEE NOTE 6


.035 MIN GAP BETWEEN END OF WIRE AND EDGE OF TRAY
.350 .370 REF
HARNESS MUST BE CLEAR OF A .400 DIA CIRCLE WHICH IS LOCATED AT THE CENTER OF EACH MODULE MOUNTING HOLE. .400 MIN DIA IN THESE LOCATIONS SHALL BE FREE OF ENCAPSULATION. ASSEMBLE FIND NOS 20,21,22, AND 23 TO FIND NO.1 BEFORE ENCAPSULATION
SEE NOTE 5
20
29
480 460 REF
Z
ENCAPSULATION HEIGHT FAR SIDE
1.681 1.691
.109 .119
ENCAPSULATION HEIGHT FAR SIDE
16
SEE NOTES 9 AND 10
31 22
SEE NOTE 5
30 21
SEE NOTE 5
32 23
SEE NOTE 5
Z
24 ASSEMBLE WIRE LIST AA
33 TO FIND NO.1 BEFORE ENCAPSULATION

ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|
| LIST OF MATERIALS | | | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± —  DECIMALS ± —  ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T INSTRUMENTATION LAB Cambridge Mass

Drawn R.J. Fox 29 SEP 64
Checked [illegible] 6 OCT 64
Approval [illegible] 7 OCT 64
M.I.T. Approval [illegible]

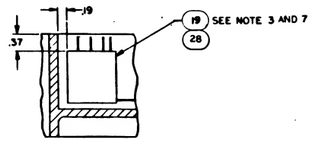
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME ASSEMBLY TRAY 1

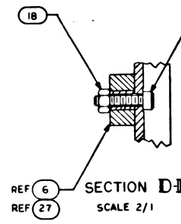
NASA Approval [illegible]
M.I.T. Approval [illegible]

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1007531
SCALE 1/1 | WT | SHEET 2 OF 2

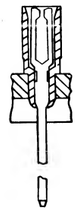
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG. NO. | DATE | APPD |
| D | | REPLACES WORD DWG REV C PER TDRR 15137 | | 12 JUL 67 | WR |
| E | | REVISED PER TDRR 15150 | | 29 JUL 67 | WR |
| F | | REVISED PER TDRR 15948 | | 7 FEB 68 | JJ |
| G | | REVISED PER TDRR 16267 | | 17 APR 68 | JJ |
| H | | REVISED PER TDRR 17613 | | 24 MAR 69 | RJJ |
| J | | REVISED PER TDRR 18690 | | 6 MAY 69 | JJJ |
| K | | REVISED PER TDRR 18691 | | 6 MAY 69 | JJJ |



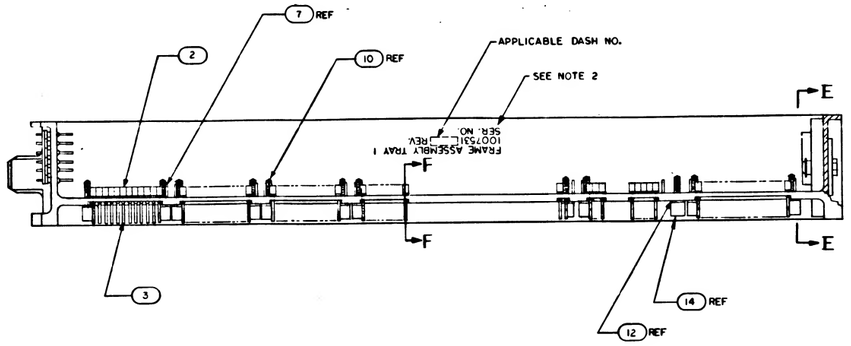

PARTIAL SECTION E-E

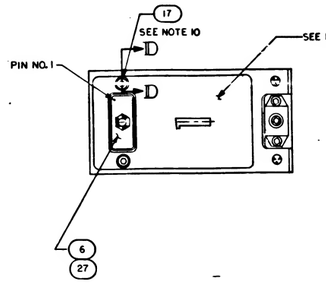



SECTION D-D
SCALE 2/1

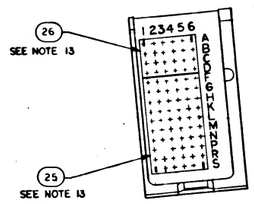


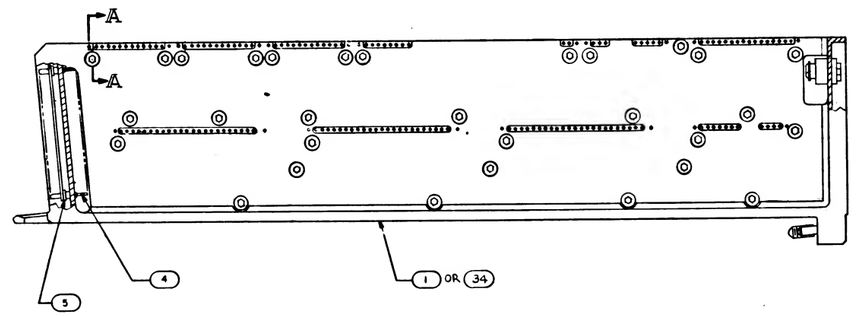
PARTIAL SECTION F-F
149 PLACES

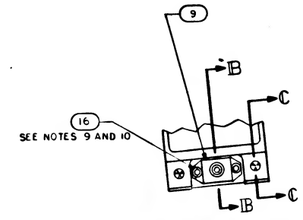


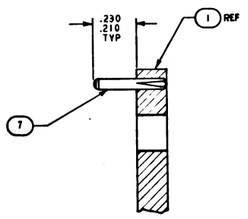




Ⓓ REPLACES WORD DWG REV C

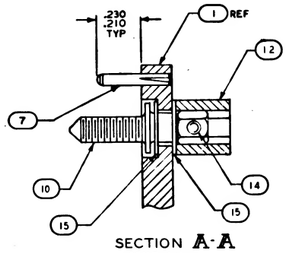


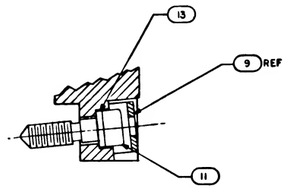



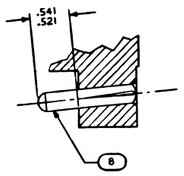

SECTION A-A
SCALE 4/1
-011 CONFIGURATION




SECTION A-A
SCALE 4/1
-021 CONFIGURATION




SECTION B-B
SCALE 2/1




SECTION C-C
SCALE 2/1

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45A1E7 | 45A1J1-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45A1E11 | 45A1J1-18 |

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER NO 1002019 BLACK, .100/.140 HIGH AND SERIALIZE PER NO 1002023.
3. BOND FIND NO. 19 TO FIND NO. 1 PER NO 1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686
4. ASSEMBLE FIND NUMBERS 2, 3, 4 AND 5 PER NO 1002136
5. BOND FIND NOS. 20, 21, 22, 23 AND 24 TO FIND NO. 1 PER NO 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER NO 1002236, SECTION 3.6, CURE CYCLE A FOR -021 CONFIGURATION AND CURE CYCLE A OR B FOR -011 CONFIGURATION USING 1012503, .010 ABOVE TO .050 BELOW PERIPHERAL SURFACES OF TRAY FRAME AND A MINIMUM DEPTH OF .010 ENCAPSULATION OVER ANY COMPONENT. PRIMER TO EXTEND BEYOND ENCAPSULATION MATERIAL, BUT NOT TO EXCEED .188 MAX. MODULE MOUNTING SURFACE TO BE FREE OF PRIMER.
7. SEE CONNECTOR TERMINATION CHART FOR FIND NO. 19, OR FIND NO. 28
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR. EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO. 16 DURING ASSEMBLY TO FIND NO. 1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NOS. 16 AND 17 TO FIND NO. 1 TO BE 5.0-5.5 IN. LB
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER NO 1002005 ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER NO 1002071. ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS.
12. PROCURE PER PS 1007141.
13. BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER NO 1002237.
14. COAT 1010622 OR 1010821 CONNECTOR SOCKET HOLES (WITH AND WITHOUT WIRES) WITH NO 1002009 METHOD D. SEAL OPENING BETWEEN FRAME AND CONNECTOR USING NO 1002004 TYPE I.

| QUANTITY REQUIRED | | EFFECTIVITY | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|---|---|
| | | | | LIST OF MATERIALS | |
| - | 1 | | 1008521 | FRAME | 34 |
| - | 1 | | 1008620 | WIRING LIST A A | 33 |
| - | 1 | | 1008619 | WIRING HARNESS D | 32 |
| - | 1 | | 1008618 | WIRING HARNESS C | 31 |
| - | 1 | | 1008617 | WIRING HARNESS B | 30 |
| - | 1 | | 1008616 | WIRING HARNESS A | 29 |
| - | 1 | | 1007586-011 | BUFFER RESISTOR ASSY | 28 |
| - | X | | 1009561 | WIRING DIAGRAM | REF |
| X | - | | 1009551 | WIRING DIAGRAM | REF |
| - | 1 | | 1010421-1 | CONNECTOR, RECEPTACLE | 27 |
| 1 | 1 | | 1006551 | GASKET, CONNECTOR TRAY | 26 |
| 1 | 1 | | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| 1 | - | | 1015741 | WIRE LIST A A | 24 |
| 1 | - | | 1015740 | WIRING HARNESS D | 23 |
| 1 | - | | 1015739 | WIRING HARNESS C | 22 |
| 1 | - | | 1015738 | WIRING HARNESS B | 21 |
| 1 | - | | 1015737 | WIRING HARNESS A | 20 |
| 1 | - | | 1007088 | BUFFER RESISTOR ASSY | 19 |
| 2 | 2 | | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| 2 | 2 | | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| 3 | 3 | | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| 30 | - | | MS171433 | PIN, SPRING | 15 |
| 30 | - | | 1004207 | DRIVE CYLINDER | 14 |
| 1 | 1 | | 1008099-2 | WASHER | 13 |
| 60 | - | | 1004206 | WASHER, THRUST | 12 |
| 1 | 1 | | 1008098 | SCREW, SOCKET HEAD | 11 |
| 30 | - | | 1008172 | SCREW, JACK | 10 |
| 1 | 1 | | 1001317 | RETAINER, JACK SCREW | 9 |
| 2 | 2 | | 1010620-5 | PIN, GUIDE | 8 |
| 20 | 20 | | MS16556-604 | PIN, GUIDE | 7 |
| 1 | - | | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| 84 | 84 | | 1010383-1 | INSULATOR, WRAPOST, MALE | 5 |
| 84 | 84 | | 1010382-1 | CONTACT BLADE EDGE CONNECTOR | 4 |
| 149 | 149 | | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| 149 | 149 | | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| 1 | - | | 1008101 | FRAME | 1 |

| 100r571 | | |
|---|---|---|
| NEXT ASSY | USED ON | APPLICABLE DASH NO |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ±.02 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB Cambridge, Mass. CONTRACT NAS9-4065
DRAWN W.J. Fox DATE 15 SEP 66
CHECKED [illegible] DATE [illegible]
APPROVED [illegible] DATE [illegible]
NASA APPROVAL W.J. Kelly
MIT APPROVAL [illegible]

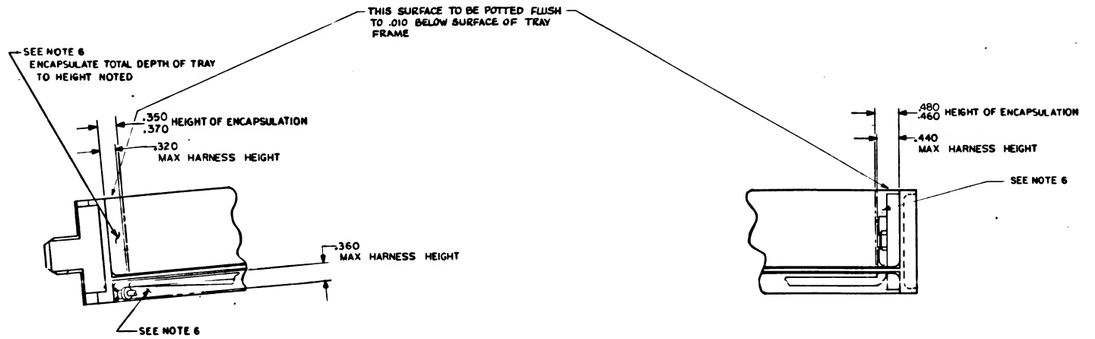
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

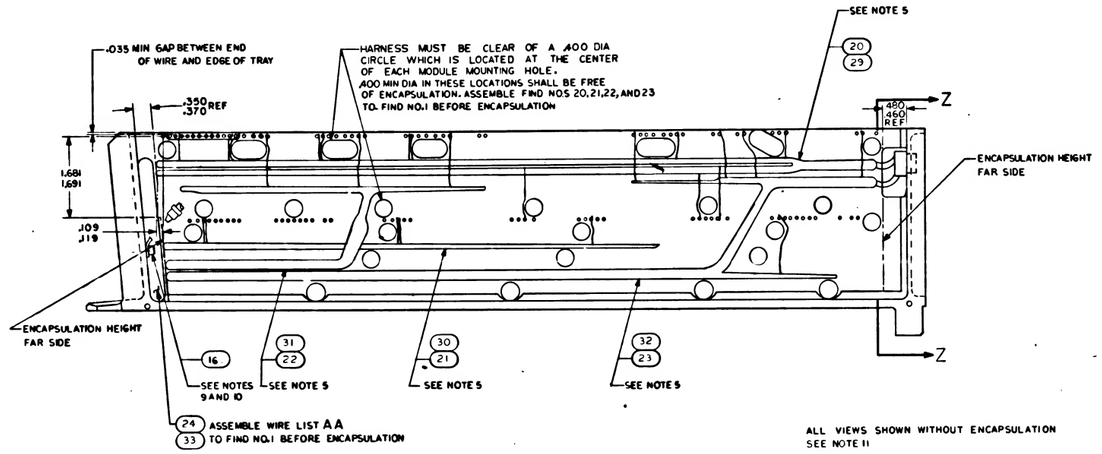
FRAME ASSEMBLY
TRAY 1

| CODE IDENT NO | SIZE | NASA DRAWING NO. |
|---|---|---|
| 80230 | E | 1007531 |
| SCALE 1/1 | WT | SHEET 1 OF 2 |

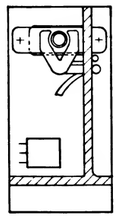
1007531 K

| REVISIONS | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPROVAL |
| D | REPLACES WORD DWG REV C PER TDRR 12732 | 16 FEB 65 | WJK |
| E | REVISED PER TDRR 15150 | 5 APR 65 | WJK |
| F | REVISED PER TDRR 15948 | 19 APR 65 | WJK |
| G | REVISED PER TDRR 16267 | 28 APR 65 | WJK |
| H | REVISED PER TDRR 17613 | 26 AUG 65 | WJK |
| J | REVISED PER TDRR 18690 | 4 NOV 65 | WJK |
| K | REVISED PER TDRR 18891 | 6 MAY 65 | WJK |


THIS SURFACE TO BE POTTED FLUSH TO .010 BELOW SURFACE OF TRAY FRAME
SEE NOTE 6 ENCAPSULATE TOTAL DEPTH OF TRAY TO HEIGHT NOTED
.350 .370 HEIGHT OF ENCAPSULATION
.320 MAX HARNESS HEIGHT
.360 MAX HARNESS HEIGHT
SEE NOTE 6
.480 .460 HEIGHT OF ENCAPSULATION
.440 MAX HARNESS HEIGHT
SEE NOTE 6


.035 MIN GAP BETWEEN END OF WIRE AND EDGE OF TRAY
.350 .370 REF
1.681 1.691
.109 .119
HARNESS MUST BE CLEAR OF A .400 DIA CIRCLE WHICH IS LOCATED AT THE CENTER OF EACH MODULE MOUNTING HOLE. .400 MIN DIA IN THESE LOCATIONS SHALL BE FREE OF ENCAPSULATION. ASSEMBLE FIND NOS 20,21,22, AND 23 TO FIND NO.1 BEFORE ENCAPSULATION
SEE NOTE 5
20
29
Z
.460 .460 REF
ENCAPSULATION HEIGHT FAR SIDE
ENCAPSULATION HEIGHT FAR SIDE
16
31
22
30
21
32
23
SEE NOTES 9 AND 10
SEE NOTE 5
SEE NOTE 5
SEE NOTE 5
24
33
ASSEMBLE WIRE LIST AA TO FIND NO.1 BEFORE ENCAPSULATION

ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY PER ASSY | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| | | LIST OF MATERIALS | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± —— DECIMALS ± —— ANGLES ± ——
DO NOT SCALE THIS DRAWING
MATERIAL ——
HEAT TREATMENT ——
FINAL FINISH ——

M I T INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN R.J. Fox 28 SEP 64
CHECKED Tom Gates
MECH ENGR APPROVAL Tom Gates
NASA APPROVAL W J Kluck 14 DEC 64
MIT APPROVAL

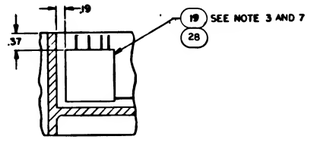
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME ASSEMBLY
TRAY 1

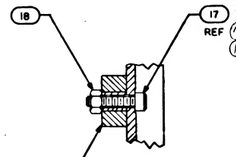
CODE IDENT NO. 80230 | SIZE E | NASA DRAWING NO. 1007531
SCALE 1/1 | WT | SHEET 2 OF 2

1007531 K

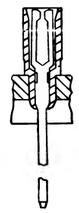
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG. NO. | DATE | APPD |
| | | PR ACES Work [illegible] REV C PER TDRR 1734 | | [illegible] | [illegible] |
| E | | REVISED PER TDRR 15150 | | [illegible] | [illegible] |
| F | | REVISED PER TDRR 15948 | | [illegible] | [illegible] |
| G | | REVISED PER TDRR 16267 | | [illegible] | [illegible] |
| H | | REVISED PER TDRR 17613 | | [illegible] | [illegible] |
| J | | REVISED PER TDRR 18490 | | [illegible] | [illegible] |
| K | | REVISED PER TDRR 18691 | | 6 MAY 85 | [illegible] |
| L | | REVISED PER TDRR 18695 | | [illegible] | [illegible] |



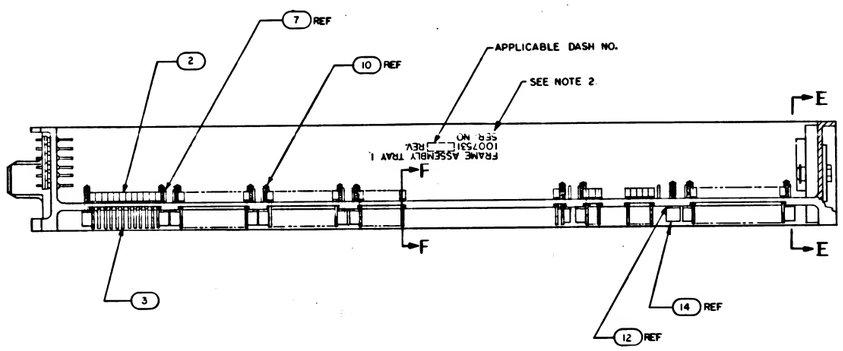

PARTIAL SECTION E-E

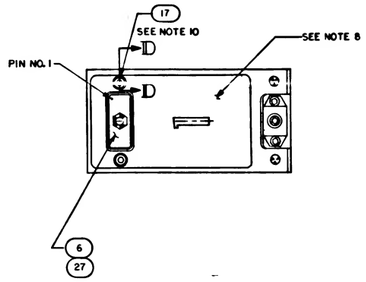



SECTION D-D
SCALE 2/1

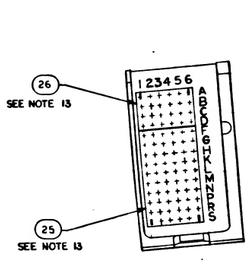


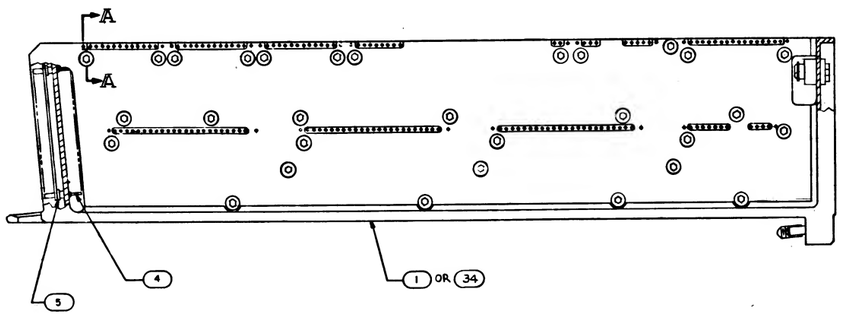
PARTIAL SECTION F-F
149 PLACES

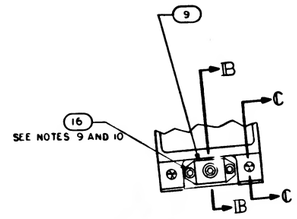


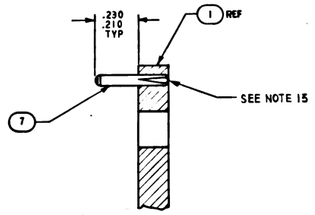




Ⓓ REPLACES WORD DWG REV C

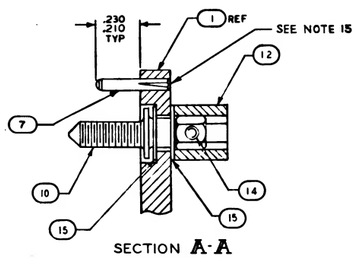


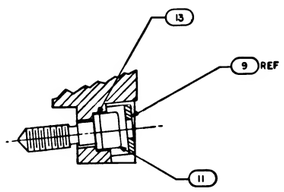




SECTION A-A
SCALE 4/1
-011 CONFIGURATION

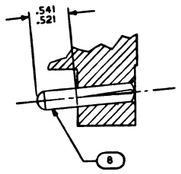



SECTION A-A
SCALE 4/1
-021 CONFIGURATION

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45A1E7 | 45A1J1-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45A1E11 | 45A1J1-18 |




SECTION B-B
SCALE 2/1




SECTION C-C
SCALE 2/1

| QUANTITY REQUIRED | | | EFFECTIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|---|---|---|
| | – | 1 | | 1008521 | FRAME | 34 |
| | – | 1 | | 1008620 | WIRING LIST A A | 33 |
| | – | 1 | | 1008619 | WIRING HARNESS D | 32 |
| | – | 1 | | 1008618 | WIRING HARNESS C | 31 |
| | – | 1 | | 1008617 | WIRING HARNESS B | 30 |
| | – | 1 | | 1008616 | WIRING HARNESS A | 29 |
| | – | 1 | | 1007586-011 | BUFFER RESISTOR ASSY | 28 |
| | X | | | 1009561 | WIRING DIAGRAM | REF |
| | X | | | 1009551 | WIRING DIAGRAM | REF |
| | – | 1 | | 1010821-1 | CONNECTOR, RECEPTACLE | 27 |
| | 1 | 1 | | 1008551 | GASKET, CONNECTOR TRAY | 26 |
| | 1 | 1 | | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| | 1 | – | | 1015741 | WIRE LIST AA | 24 |
| | 1 | – | | 1015740 | WIRING HARNESS D | 23 |
| | 1 | – | | 1015739 | WIRING HARNESS C | 22 |
| | 1 | – | | 1015738 | WIRING HARNESS B | 21 |
| | 1 | – | | 1015737 | WIRING HARNESS A | 20 |
| | 1 | – | | 1007088 | BUFFER RESISTOR ASSY | 19 |
| | 2 | 2 | | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| | 2 | 2 | | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| | 3 | 3 | | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| | 30 | – | | MS171433 | PIN, SPRING | 15 |
| | 30 | – | | 1004207 | DRIVE CYLINDER | 14 |
| | 1 | 1 | | 1008099-2 | WASHER | 13 |
| | 60 | – | | 1004206 | WASHER, THRUST | 12 |
| | 1 | 1 | | 1008098 | SCREW, SOCKET HEAD | 11 |
| | 30 | – | | 1008172 | SCREW, JACK | 10 |
| | 1 | 1 | | 1001317 | RETAINER, JACK SCREW | 9 |
| | 2 | 2 | | 1010620-5 | PIN, GUIDE | 8 |
| | 20 | 20 | | MS 14556-004 | PIN, GUIDE | 7 |
| | 1 | – | | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| | 84 | 84 | | 1010383-1 | INSULATOR, WRAPOST, MALE | 5 |
| | 84 | 84 | | 1010382-1 | CONTACT BLADE EDGE CONNECTOR | 4 |
| | 149 | 149 | | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| | 149 | 149 | | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| | 1 | – | | 1008101 | FRAME | 1 |

LIST OF MATERIALS 9

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER NO 1002019 BLACK, .100/.140 HIGH AND SERIALIZE PER NO 1002023.
3. BOND FIND NO. 19 TO FIND NO. 1 PER NO 1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686
4. ASSEMBLE FIND NUMBERS 2, 3, 4 AND 5 PER NO 1002136
5. BOND FIND NOS. 20, 21, 22, 23 AND 24 TO FIND NO. 1 PER NO 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER NO 1002236, SECTION 3.6, CURE CYCLE A FOR -021 CONFIGURATION AND CURE CYCLE A OR B FOR -011 CONFIGURATION USING 10125C3, .010 ABOVE TO .050 BELOW PERIPHERAL SURFACES OF TRAY FRAME AND A MINIMUM DEPTH OF .010 ENCAPSULATION OVER ANY COMPONENT. PRIMER TO EXTEND BEYOND ENCAPSULATION MATERIAL, BUT NOT TO EXCEED .188 MAX. MODULE MOUNTING SURFACE TO BE FREE OF PRIMER.
7. SEE CONNECTOR TERMINATION CHART FOR FIND NO. 19, OR FIND NO. 28
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR. EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO. 16 DURING ASSEMBLY TO FIND NO. 1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NOS. 16 AND 17 TO FIND NO. 1 TO BE 5.0-5.5 IN. LB
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER NO 1002005 ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER NO 1002071. ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS.
12. PROCURE PER PS 1007141.
13. BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER NO 1002237.
14. COAT 1010622 OR 1010821 CONNECTOR SOCKET HOLES (WITH AND WITHOUT WIRES) WITH NO 1002009 METHOD D. SEAL OPENING BETWEEN FRAME AND CONNECTOR USING NO 1002004 TYPE I.
15. FILL MODULE GUIDE PIN HOLES AND ANY ASSOCIATED CRACKS IN PLATING (AFTER GUIDE PIN INSERTION) USING TYPE I ADHESIVE PER ND1002004, POTTING SIDE ONLY.

| 1007571 | | |
|---|---|---|
| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± DECIMALS XX ±.02 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
DRAWN [illegible] DATE 28SEP64
CHECKED [illegible]
APPROVED [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

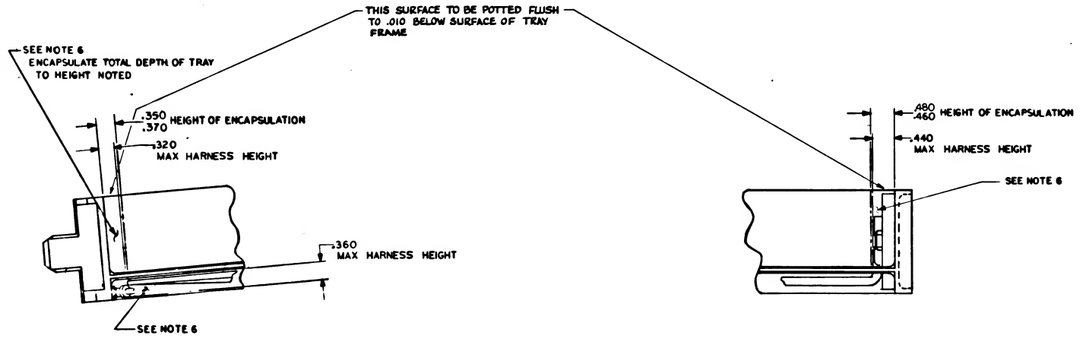
FRAME ASSEMBLY
TRAY 1

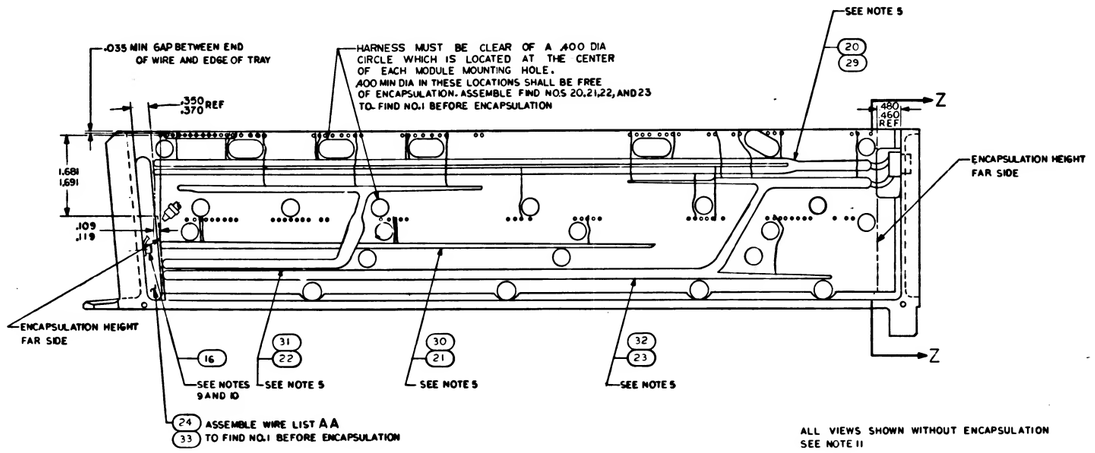
| CODE IDENT NO. | SIZE | NASA DRAWING NO. |
|---|---|---|
| 80230 | E | 1007531 |
| SCALE 1/1 | WT | SHEET 1 OF 2 |

1007531

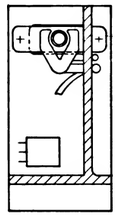
6 5 4 3 2 1

| SYM | REVISIONS DESCRIPTION | DATE | APPROVAL |
|---|---|---|---|
| D | REPLACES WORD DWG REV C PER TDRR 13779 | 4/6/67 | |
| E | REVISED PER TDRR 15150 | 8/28/67 | |
| F | REVISED PER TDRR 15948 | 1/22/68 | |
| G | REVISED PER TDRR 16267 | 3/26/68 | |
| H | REVISED PER TDRR 17613 | 10/2/68 | |
| J | REVISED PER TDRR 18690 | 4/4/69 | |
| K | REVISED PER TDRR 18691 | 6/24/69 | |
| L | REVISED PER TDRR 18695 | 11/24/69 | |


THIS SURFACE TO BE POTTED FLUSH TO .010 BELOW SURFACE OF TRAY FRAME
SEE NOTE 6
ENCAPSULATE TOTAL DEPTH OF TRAY TO HEIGHT NOTED
.350 .370 HEIGHT OF ENCAPSULATION
.320 MAX HARNESS HEIGHT
.360 MAX HARNESS HEIGHT
SEE NOTE 6
.480 .460 HEIGHT OF ENCAPSULATION
.440 MAX HARNESS HEIGHT
SEE NOTE 6


.035 MIN GAP BETWEEN END OF WIRE AND EDGE OF TRAY
HARNESS MUST BE CLEAR OF A .400 DIA CIRCLE WHICH IS LOCATED AT THE CENTER OF EACH MODULE MOUNTING HOLE. .400 MIN DIA IN THESE LOCATIONS SHALL BE FREE OF ENCAPSULATION. ASSEMBLE FIND NOS 20,21,22, AND 23 TO FIND NO.1 BEFORE ENCAPSULATION
SEE NOTE 5
20
29
.350 .370 REF
.480 .460 REF
Z
Z
1.681 1.691
.109 .119
ENCAPSULATION HEIGHT FAR SIDE
ENCAPSULATION HEIGHT FAR SIDE
16
31
22
30
21
32
23
SEE NOTES 9 AND 10
SEE NOTE 5
SEE NOTE 5
SEE NOTE 5
24
33
ASSEMBLE WIRE LIST AA TO FIND NO.1 BEFORE ENCAPSULATION

ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| | | LIST OF MATERIALS | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± —— DECIMALS ± —— ANGLES ± ——
DO NOT SCALE THIS DRAWING
MATERIAL ——
HEAT TREATMENT ——
FINAL FINISH ——

M.I.T. INSTRUMENTATION LAB Cambridge, Mass.

DRAWN R.J.S. DATE 29 SEP 66
CHECKED [illegible] 3 Sept 66
ENGINEERING APPROVAL [illegible] 9 OCT 66
NASA APPROVAL [illegible] 10-24-66
MIT APPROVAL [illegible]

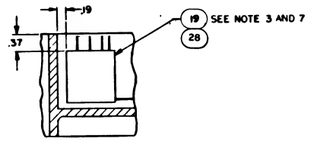
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

FRAME ASSEMBLY TRAY 1

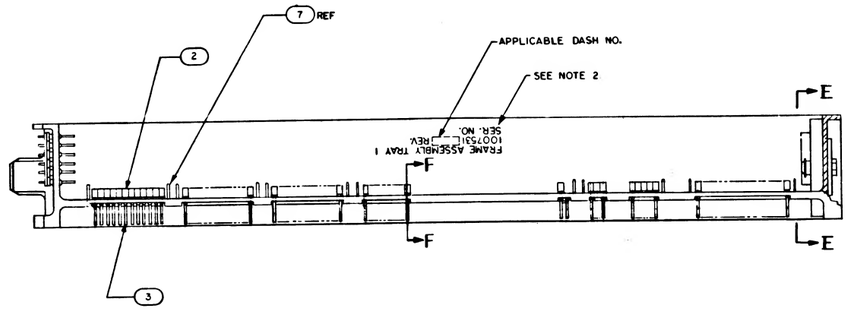
CODE IDENT NO. 80230 | SIZE E | NASA DRAWING NO. 1007531

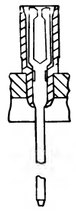
SCALE 1/1 | WT | SHEET 2 OF 2

1007531

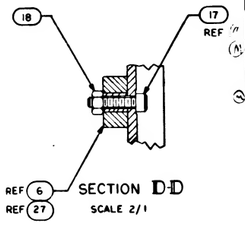



PARTIAL SECTION E-E

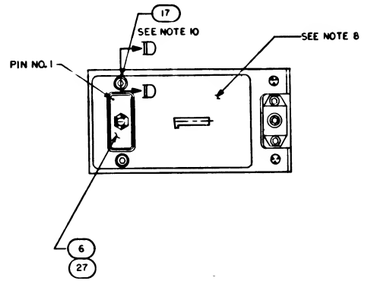


PARTIAL SECTION F-F
149 PLACES

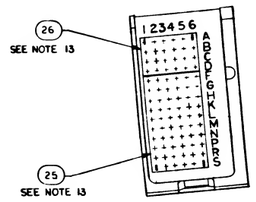


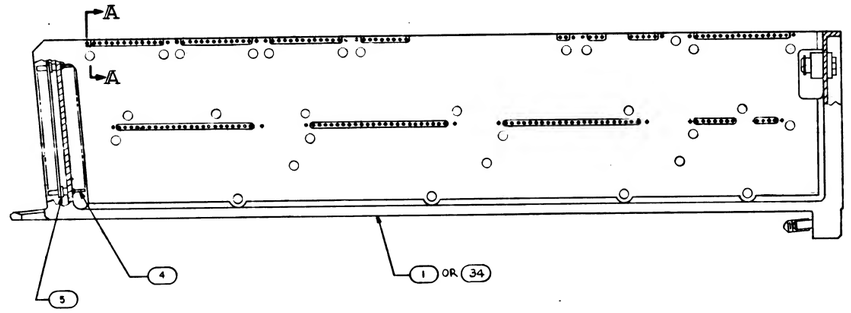

SECTION D-D
SCALE 2/1

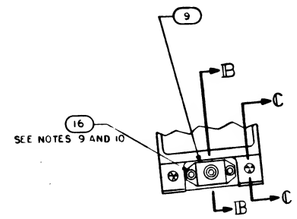


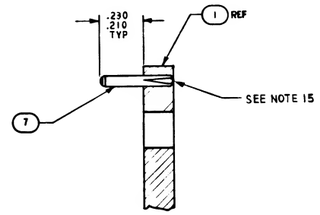

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG. NO. | DATE | APPD |
| E | | REVISED PER TDRR 15150 | | | |
| F | | REVISED PER TDRR 15948 | | | |
| G | | REVISED PER TDRR 16267 | | 19 FEB 65 | |
| H | | REVISED PER TDRR 17613 | | 30 MAR 65 | |
| J | | REVISED PER TDRR 18690 | | | |
| K | | REVISED PER TDRR 18691 | | | |
| L | | REVISED PER TDRR 18695 | | | |
| M | | REVISED PER TDRR 20119 | | | |

D REPLACES WOPD DWG REV C

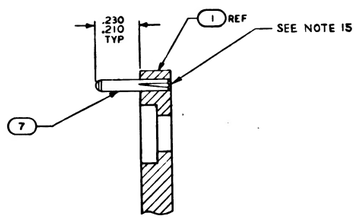


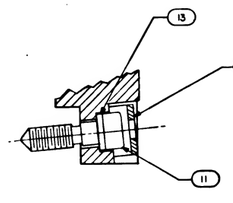




SECTION A-A
SCALE 4/1
-011 CONFIGURATION

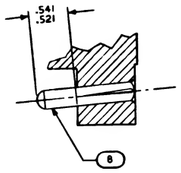



SECTION A-A
SCALE 4/1
-021 CONFIGURATION

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45AIE7 | 45AIJI-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45AIE11 | 45AIJI-18 |




SECTION B-B
SCALE 2/1




SECTION C-C
SCALE 2/1

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER ND 1002019 BLACK, .100/.140 HIGH AND SERIALIZE PER ND 1002023.
3. BOND FIND NO. 19 TO FIND NO. 1 PER ND 1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686
4. ASSEMBLE FIND NUMBERS 2, 3, 4 AND 5 PER ND 1002136
5. BOND FIND NOS. 20, 21, 22, 23 AND 24 TO FIND NO. 1 PER ND 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER ND 1002236, SECTION 3.6, CURE CYCLE A FOR -021 CONFIGURATION AND CURE CYCLE A OR B FOR -011 CONFIGURATION USING 1012503, .010 ABOVE TO .050 BELOW PERIPHERAL SURFACES OF TRAY FRAME AND A MINIMUM DEPTH OF .010 ENCAPSULATION OVER ANY COMPONENT. PRIMER TO EXTEND BEYOND ENCAPSULATION MATERIAL, BUT NOT TO EXCEED .188 MAX. MODULE MOUNTING SURFACE TO BE FREE OF PRIMER.
7. SEE CONDUCTOR TERMINATION CHART FOR FIND NO. 19, OR FIND NO. 28
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR. EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO. 16 DURING ASSEMBLY TO FIND NO. 1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NOS. 16 AND 17 TO FIND NO. 1 TO BE 5.0-5.5 IN. LB
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER ND 1002005 ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER ND 1002071. ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS.
12. PROCURE PER PS 1007141.
13. BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER ND 1002237.
14. COAT 1010622 OR 1010821 CONNECTOR SOCKET HOLES (WITH AND WITHOUT WIRES) WITH ND 1002009 METHOD D. SEAL OPENING BETWEEN FRAME AND CONNECTOR USING ND 1002004 TYPE I.
15. FILL MODULE GUIDE PIN HOLES AND ANY ASSOCIATED CRACKS IN PLATING (AFTER GUIDE PIN INSERTION) USING TYPE I ADHESIVE PER ND1002004, POTTING SIDE ONLY.

| QUANTITY REQUIRED | | EFFEC TIVITY | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|---|---|
| - | 1 | | 1008521 | FRAME | 34 |
| - | 1 | | 1004620 | WIRING LIST A A | 33 |
| - | 1 | | 1008619 | WIRING HARNESS D | 32 |
| - | 1 | | 1008618 | WIRING HARNESS C | 31 |
| - | 1 | | 1008617 | WIRING HARNESS B | 30 |
| - | 1 | | 1008616 | WIRING HARNESS A | 29 |
| - | 1 | | 1007586-011 | BUFFER RESISTOR ASSY | 28 |
| - | X | | 1009561 | WIRING DIAGRAM | REF |
| X | - | | 1009551 | WIRING DIAGRAM | REF |
| - | 1 | | 1010821-1 | CONNECTOR, RECEPTACLE | 27 |
| 1 | 1 | | 1008551 | GASKET, CONNECTOR TRAY | 26 |
| 1 | 1 | | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| 1 | - | | 1015741 | WIRE LIST A A | 24 |
| 1 | - | | 1015740 | WIRING HARNESS D | 23 |
| 1 | - | | 1015739 | WIRING HARNESS C | 22 |
| 1 | - | | 1015738 | WIRING HARNESS B | 21 |
| 1 | - | | 1015737 | WIRING HARNESS A | 20 |
| 1 | - | | 1007088 | BUFFER RESISTOR ASSY | 19 |
| 2 | 2 | | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| 2 | 2 | | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| 3 | 3 | | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| 30 | - | | MS171433 | PIN, SPRING | 15 |
| 30 | - | | 1004207 | DRIVE CYLINDER | 14 |
| 1 | 1 | | 1008099-2 | WASHER | 13 |
| 60 | - | | 1004206 | WASHER, THRUST | 12 |
| 1 | 1 | | 1008098 | SCREW, SOCKET HEAD | 11 |
| 30 | - | | 1008172 | SCREW, JACK | 10 |
| 1 | 1 | | 1001317 | RETAINER, JACK SCREW | 9 |
| 2 | 2 | | 1010620-5 | PIN, GUIDE | 8 |
| 20 | 20 | | MS [illegible]-004 | PIN, GUIDE | 7 |
| 1 | - | | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| 84 | 84 | | 1010383-1 | INSULATOR, WRAPOST, MALE | 5 |
| 84 | 84 | | 1010382-1 | CONTACT BLADE EDGE CONNECTOR | 4 |
| 149 | 149 | | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| 149 | 149 | | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| 1 | - | | 1008101 | FRAME | 1 |

LIST OF MATERIALS

| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
|---|---|---|
| 100-571 | | |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± XX ±.02 ± 1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
Cambridge, Mass.
Contract NAS 9-153

DRAWN [illegible] DATE 15 SEP 64
CHECKED [illegible] DATE [illegible]
APPROVED [illegible] DATE [illegible]
APPROVED [illegible] DATE [illegible]

NASA APPROVAL [illegible] DATE [illegible]
MIT APPROVAL [illegible] DATE [illegible]

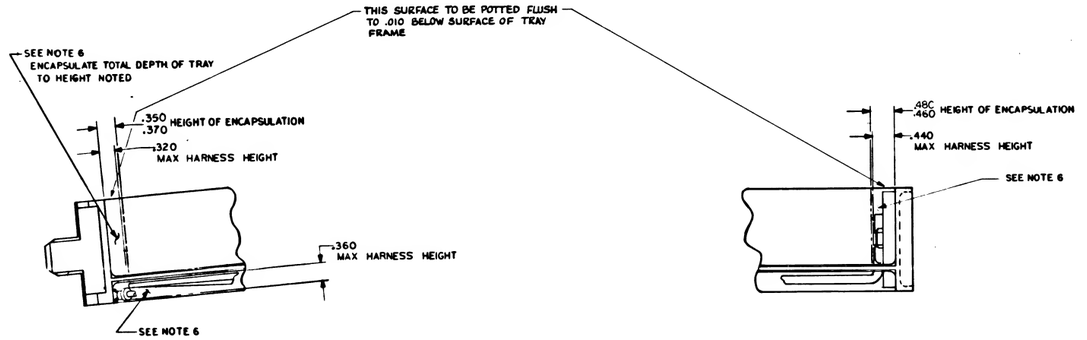
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

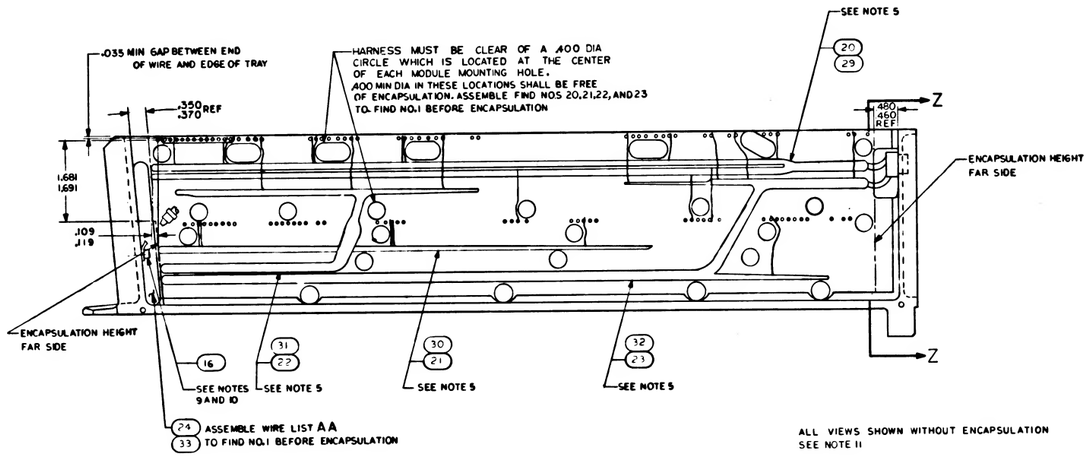
# FRAME ASSEMBLY TRAY 1

| CODE IDENT NO. | SIZE | NASA DRAWING NO. |
|---|---|---|
| 80230 | E | 1007531 |
| SCALE 1/1 | WT | SHEET 1 OF 2 |

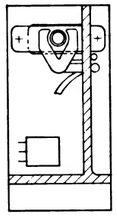
1007531 M

| REVISIONS | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPROVAL |
| D | RELEASED PER DAC REV C PER TDRR 2737 | 1/6 | |
| E | REVISED PER TDRR 15150 | 7/16/69 | |
| F | REVISED PER TDRR 15948 | FEB 69 | |
| G | REVISED PER TDRR 16267 | 3 APR 69 | |
| H | REVISED PER TDRR 17613 | 30 JUNE 69 | |
| J | REVISED PER TDRR 8690 | 5-7-70 | |
| K | REVISED PER TDRR 8891 | 6-2-70 | |
| L | REVISED PER TDRR 8695 | 6-25-70 | |
| M | REVISION STATUS CHANGED PER TDRR 20119 | 5-11-71 | |


THIS SURFACE TO BE POTTED FLUSH TO .010 BELOW SURFACE OF TRAY FRAME
SEE NOTE 6
ENCAPSULATE TOTAL DEPTH OF TRAY TO HEIGHT NOTED
.350 .370 HEIGHT OF ENCAPSULATION
.320 MAX HARNESS HEIGHT
.360 MAX HARNESS HEIGHT
SEE NOTE 6
.480 .460 HEIGHT OF ENCAPSULATION
.440 MAX HARNESS HEIGHT
SEE NOTE 6




ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY REQD | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|
| LIST OF MATERIALS | | | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ± —— DECIMALS ± —— ANGLES ± ——
DO NOT SCALE THIS DRAWING
MATERIAL ——
HEAT TREATMENT ——
FINISH ——

M I T INSTRUMENTATION LAB (Construction Metrology)
DRAWN R.J.Fox 30 SEP 69
CHECKED
APPROVED
M.I.T. APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

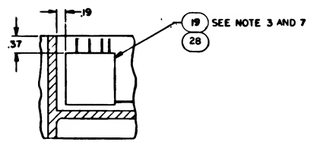
FRAME ASSEMBLY
TRAY 1

| CODE IDENT NO | SIZE | NASA DRAWING NO |
|---|---|---|
| 80230 | E | 1007531 |
| SCALE 1/1 | WT | SHEET 2 OF 2 |

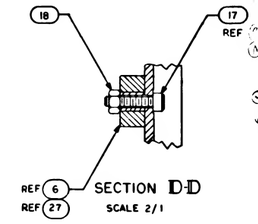
1007531 M

NOTICE - THIS DOCUMENT DESCRIBES SPECIFICATIONS OR ITEMS NOT ...

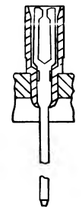
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG. NO. | DATE | APPD |
| E | | REVISED PER TDRR 15150 | | | |
| F | | REVISED PER TDRR 15948 | | | |
| G | | REVISED PER TDRR 16267 | | | |
| H | | REVISED PER TDRR 17613 | | | |
| J | | REVISED PER TDRR 18490 | | | |
| K | | REVISED PER TDRR 18691 | | | |
| L | | REVISED PER TDRR 8695 | | | |
| M | | REVISED PER TDRR 20119 | | | |
| N | | REVISED PER TDRR 20785 | | | |



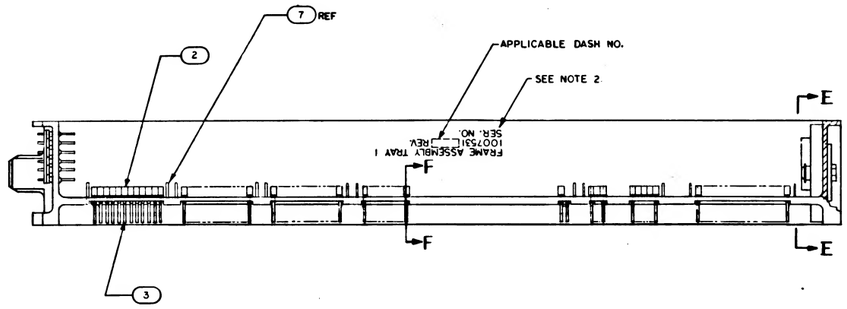

PARTIAL SECTION E-E

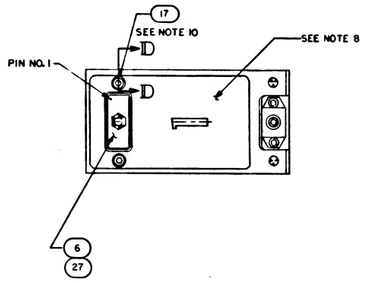



SECTION D-D
SCALE 2/1

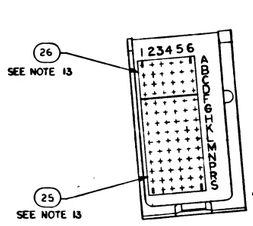


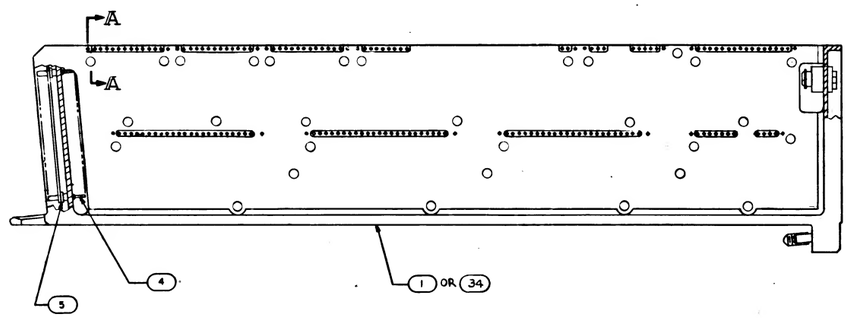
PARTIAL SECTION F-F
149 PLACES

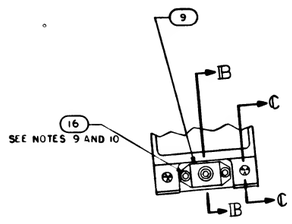


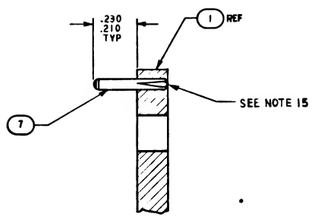




D REPLACES WORD DWG REV C

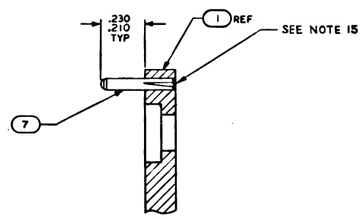


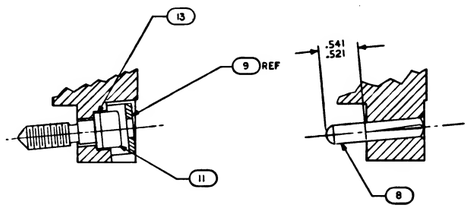




SECTION A-A
SCALE 4/1
-011 CONFIGURATION




SECTION A-A
SCALE 4/1
-021 CONFIGURATION

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45A1E7 | 45A1J1-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45A1E11 | 45A1J1-18 |




SECTION B-B
SCALE 2/1

SECTION C-C
SCALE 2/1

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER ND 1002019 BLACK, .100/.140 HIGH AND SERIALIZE PER ND 1002023.
3. BOND FIND NO. 19 TO FIND NO. 1 PER ND 1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686
4. ASSEMBLE FIND NUMBERS 2, 3, 4 AND 5 PER ND 1002136
5. BOND FIND NOS. 20, 21, 22, 23 AND 24 TO FIND NO. 1 PER ND 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER ND 1002236, SECTION 3.6, CURE CYCLE A FOR -021 CONFIGURATION AND CURE CYCLE A OR B FOR -011 CONFIGURATION USING 1012503, .010 ABOVE TO .050 BELOW PERIPHERAL SURFACES OF TRAY FRAME AND A MINIMUM DEPTH OF .010 ENCAPSULATION OVER ANY COMPONENT. PRIMER TO EXTEND BEYOND ENCAPSULATION MATERIAL, BUT NOT TO EXCEED .188 MAX. MODULE MOUNTING SURFACE TO BE FREE OF PRIMER.
7. SEE CONNECTOR TERMINATION CHART FOR FIND NO. 19, OR FIND NO. 28
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR. EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO. 16 DURING ASSEMBLY TO FIND NO. 1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NOS. 16 AND 17 TO FIND NO. 1 TO BE 5.0-5.5 IN. LB
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER ND 1002005 ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER ND 1002071. ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS.
12. PROCURE PER PS 1007141.
13. BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER ND 1002237.
14. ~~COAT 1010622 OR 1010821 CONNECTOR SOCKET HOLES (WITH AND WITHOUT WIRES) WITH ND 1002005 METHOD D. SEAL OPENING BETWEEN FRAME AND CONNECTOR USING ND 1002004 TYPE I.~~ COAT 1010622 OR 1010821 CONNECTOR SOCKET HOLES (WITH AND WITHOUT WIRES) WITH A FORMULATION CONSISTING OF 40 PARTS BY WT. 1010959-1, 100 PARTS BY WT. 1010959-2, AND 7 PARTS BY WT. 1006277 AND CURE AT ROOM TEMPERATURE FOR THREE HOURS OR ONE HOUR AT 140°F. LIMITED AMOUNT ALLOWED TO CONTACT TRAY FRAME. SEAL OPENING BETWEEN FRAME AND CONNECTOR USING ND 1002004, TYPE I.
15. FILL MODULE GUIDE PIN HOLES AND ANY ASSOCIATED CRACKS IN PLATING (AFTER GUIDE PIN INSERTION) USING TYPE I ADHESIVE PER ND 1002004, POTTING SIDE ONLY.

| QUANTITY REQUIRED | EFFECTIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|---|
| - | 1 | 1008521 | FRAME | 34 |
| - | 1 | 1008620 | WIRING LIST A A | 33 |
| - | 1 | 1008619 | WIRING HARNESS D | 32 |
| - | 1 | 1008618 | WIRING HARNESS C | 31 |
| - | 1 | 1008617 | WIRING HARNESS B | 30 |
| - | 1 | 1008616 | WIRING HARNESS A | 29 |
| - | 1 | 1007586-011 | BUFFER RESISTOR ASSY | 28 |
| - | X | 1009561 | WIRING DIAGRAM | REF |
| X | - | 1009551 | WIRING DIAGRAM | REF |
| - | 1 | 1010821-1 | CONNECTOR, RECEPTACLE | 27 |
| 1 | 1 | 1008551 | GASKET, CONNECTOR TRAY | 26 |
| 1 | 1 | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| 1 | - | 1015741 | WIRE LIST A A | 24 |
| 1 | - | 1015740 | WIRING HARNESS D | 23 |
| 1 | - | 1015739 | WIRING HARNESS C | 22 |
| 1 | - | 1015738 | WIRING HARNESS B | 21 |
| 1 | - | 1015737 | WIRING HARNESS A | 20 |
| 1 | - | 1007088 | BUFFER RESISTOR ASSY | 19 |
| 2 | 2 | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| 2 | 2 | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| 3 | 3 | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| ~~30~~ | - | ~~MS171433~~ | ~~PIN, SPRING~~ | 15 |
| ~~30~~ | - | ~~1004207~~ | ~~DRIVE CYLINDER~~ | 14 |
| 1 | 1 | 1008099-2 | WASHER | 13 |
| ~~60~~ | - | ~~1004206~~ | ~~WASHER, THRUST~~ | 12 |
| 1 | 1 | 1008098 | SCREW, SOCKET HEAD | 11 |
| ~~30~~ | - | ~~1008172~~ | ~~SCREW, JACK~~ | 10 |
| 1 | 1 | 1001317 | RETAINER, JACK SCREW | 9 |
| 2 | 2 | 1010620-5 | PIN, GUIDE | 8 |
| 20 | 20 | MS 3356-004 | PIN, GUIDE | 7 |
| 1 | - | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| 84 | 84 | 1010383-1 | INSULATOR, WRAPPOST, MALE | 5 |
| 84 | 84 | 1010382-1 | CONTACT BLADE EDGE CONNECTOR | 4 |
| 149 | 149 | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| 149 | 149 | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| 1 | - | 1008101 | FRAME | 1 |

LIST OF MATERIALS

| | | |
|---|---|---|
| 100-571 | | |
| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS XX ±.02 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB Cambridge, Mass
DRAWN DATE SEP 64
CHECKED
APPROVED
APPROVED

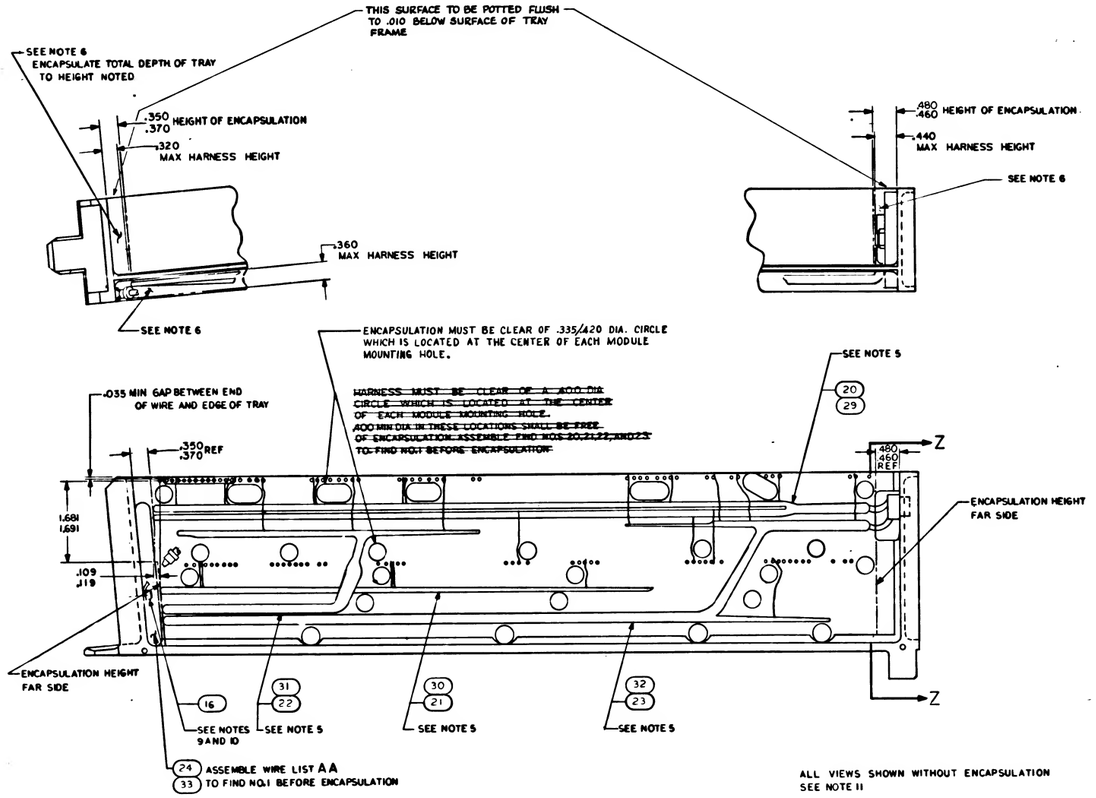
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

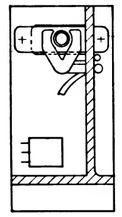
FRAME ASSEMBLY
TRAY 1

NASA APPROVAL
MIT APPROVAL

CODE IDENT NO. 80230 | SIZE E | NASA DRAWING NO 1007531
SCALE 1/1 | WT | SHEET 1 OF 2

| REVISIONS | | | | |
|---|---|---|---|---|
| QTY | | DESCRIPTION | DATE | APPROVAL |
| | D | REPLACES WORD DWG REV C PER TDRR 1739 | 6/6/64 | |
| | E | REVISED PER TDRR 15150 | 8/24/64 | |
| | F | REVISED PER TDRR 15948 | 11 FEB 65 | |
| | G | REVISED PER TDRR 16267 | 7 FEB 65 | |
| | H | REVISED PER TDRR 17613 | 26 MAR 65 | |
| | J | REVISED PER TDRR 18690 | 4 OCT 65 | |
| | K | REVISED PER TDRR 18691 | 6 MAY 66 | |
| | L | REVISED PER TDRR 18695 | 11 MAY 66 | |
| | M | REVISION STATUS CHANGED PER TDRR 20119 | 19 JULY 67 | |
| | N | REVISED PER TDRR 20785 | 20 SEP 67 | |


THIS SURFACE TO BE POTTED FLUSH TO .010 BELOW SURFACE OF TRAY FRAME
SEE NOTE 6
ENCAPSULATE TOTAL DEPTH OF TRAY TO HEIGHT NOTED
.350 .370 HEIGHT OF ENCAPSULATION
.320 MAX HARNESS HEIGHT
.360 MAX HARNESS HEIGHT
SEE NOTE 6
.480 .460 HEIGHT OF ENCAPSULATION
.440 MAX HARNESS HEIGHT
SEE NOTE 6
ENCAPSULATION MUST BE CLEAR OF .335/.420 DIA. CIRCLE WHICH IS LOCATED AT THE CENTER OF EACH MODULE MOUNTING HOLE.
HARNESS MUST BE CLEAR OF A .400 DIA CIRCLE WHICH IS LOCATED AT THE CENTER OF EACH MODULE MOUNTING HOLE.
.400 MIN DIA IN THESE LOCATIONS SHALL BE FREE OF ENCAPSULATION ASSEMBLE FIND NOS 20,21,22,&23 TO FIND NO.1 BEFORE ENCAPSULATION
.035 MIN GAP BETWEEN END OF WIRE AND EDGE OF TRAY
.350 .370 REF
SEE NOTE 5
20
29
Z
480 460 REF
1.681 1.691
.109 .119
ENCAPSULATION HEIGHT FAR SIDE
ENCAPSULATION HEIGHT FAR SIDE
16
SEE NOTES 9 AND 10
31
22
SEE NOTE 5
30
21
SEE NOTE 5
32
23
SEE NOTE 5
24
33
ASSEMBLE WIRE LIST AA TO FIND NO.1 BEFORE ENCAPSULATION
ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11



SECTION Z-Z

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| | | LIST OF MATERIALS | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± —  DECIMALS ± —  ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB
DRAWN [illegible] 8/24/64
CHECKED [illegible]
APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

FRAME ASSEMBLY
TRAY 1

NASA APPROVAL [illegible]

CODE IDENT NO 80230 | SIZE E | NASA DRAWING NO 1007531
SCALE 1/1 | WT | SHEET 2 OF 2

1007531 N

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHNG. NO | DATE | APPD |
| - | | PER ACES WORD DWG REV C PER TDRR [illegible] | | [illegible] | [illegible] |
| E | | REVISED PER TDRR 15150 | | [illegible] | [illegible] |
| F | | REVISED PER TDRR 15948 | | FEB 66 | |
| G | | REVISED PER TDRR 16267 | | 4 FEB 66 | [illegible] |
| H | | REVISED PER TDRR 17613 | | 30 MAR 66 | [illegible] |
| J | | REVISED PER TDRR 18690 | | 4 MAY 66 | [illegible] |
| K | | REVISED PER TDRR 18691 | | 6 MAY 66 | [illegible] |
| L | | REVISED PER TDRR 18695 | | 9 MAY 66 | [illegible] |
| M | | REVISED PER TDRR 20119 | | 21 JUNE 66 | [illegible] |
| N | | REVISED PER TDRR 20785 | | 29 JULY 66 | WJR RWH |
| P | | REVISED PER TDRR 26389 | | 23 FEB 66 | JB |

PARTIAL SECTION E-E

PARTIAL SECTION F-F
149 PLACES

SECTION D-D
SCALE 2/1

D REPLACES WORD DWG REV C

SECTION A-A
SCALE 4/1
-011 CONFIGURATION

SECTION A-A
SCALE 4/1
-021 CONFIGURATION

SECTION B-B
SCALE 2/1

SECTION C-C
SCALE 2/1

| TERMINATION CHART | |
|---|---|
| FROM | TO |
| 45AIE7 | 45AIJ1-12 |
| E8 | -3 |
| E9 | -33 |
| E10 | -17 |
| 45AIE11 | 45AIJ1-18 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | AR | - | - | | SEE NOTE 18 | MOISTURE-PROOFING | 39 |
| | 1 | - | - | | 1008335 | GASKET, WASP | 38 |
| | 1 | - | - | | 1008338 | GASKET, CONNECTOR TRAY | 37 |
| | 1 | - | - | | 1008337 | GASKET, CONNECTOR TRAY | 36 |
| | 1 | - | - | | 1008333 | RETAINER, JACK SCREW | 35 |
| | 1 | - | 1 | | 1008521 | FRAME | 34 |
| | 1 | - | 1 | | 1008620 | WIRING LIST A A | 33 |
| | 1 | - | 1 | | 1008619 | WIRING HARNESS D | 32 |
| | 1 | - | 1 | | 1008618 | WIRING HARNESS C | 31 |
| | 1 | - | 1 | | 1008617 | WIRING HARNESS B | 30 |
| | 1 | - | 1 | | 1008616 | WIRING HARNESS A | 29 |
| | 1 | - | 1 | | 1007586-011 | BUFFER RESISTOR ASSY | 28 |
| | X | - | X | | 1009561 | WIRING DIAGRAM | REF |
| | - | X | - | | 1009551 | WIRING DIAGRAM | REF |
| | 1 | - | 1 | | 1010821-1 | CONNECTOR, RECEPTACLE | 27 |
| | - | 1 | 1 | | 1008551 | GASKET, CONNECTOR TRAY | 26 |
| | - | 1 | 1 | | 1008552 | GASKET, CONNECTOR TRAY | 25 |
| | - | 1 | - | | 1015741 | WIRE LIST A A | 24 |
| | - | 1 | - | | 1015740 | WIRING HARNESS D | 23 |
| | - | 1 | - | | 1015739 | WIRING HARNESS C | 22 |
| | - | 1 | - | | 1015738 | WIRING HARNESS B | 21 |
| | - | 1 | - | | 1015737 | WIRING HARNESS A | 20 |
| | - | 1 | - | | 1007088 | BUFFER RESISTOR ASSY | 19 |
| | 2 | 2 | 2 | | MA21045 C 04 | NUT SELF-LOCKING HEX | 18 |
| | 2 | 2 | 2 | | MS16995-11 | SCREW, CAP, SOCKET, HEAD | 17 |
| | 3 | 3 | 3 | | MS16995-10 | SCREW, CAP, SOCKET, HEAD | 16 |
| | - | 30 | - | | ~~MS171423~~ | ~~PIN, SPRING~~ | 15 |
| | - | 30 | - | | ~~1004207~~ | ~~DRIVE CYLINDER~~ | 14 |
| | 1 | 1 | 1 | | 1008099-2 | WASHER | 13 |
| | - | 60 | - | | ~~1004206~~ | ~~WASHER, THRUST~~ | 12 |
| | 1 | 1 | 1 | | 1008098 | SCREW, SOCKET HEAD | 11 |
| | - | 30 | - | | ~~1008172~~ | ~~SCREW, JACK~~ | 10 |
| | - | 1 | 1 | | 1001317 | RETAINER, JACK SCREW | 9 |
| | 2 | 2 | 2 | | 1010620-5 | PIN, GUIDE | 8 |
| | 20 | 20 | 20 | | MS [illegible]-004 | PIN, GUIDE | 7 |
| | - | 1 | - | | 1010622-1 | CONNECTOR, RECEPTACLE | 6 |
| | 84 | 84 | 84 | | 1010383-1 | INSULATOR, WRAPOST, MALE | 5 |
| | 84 | 84 | 84 | | 1010382-1 | CONTACT BLADE EDGE CONNECTOR | 4 |
| | 149 | 149 | 149 | | 1006781-2 | CONTACT, WRAPOST, FEMALE MIN | 3 |
| | 149 | 149 | 149 | | 1006774 | INSULATOR, WRAPOST, FEMALE MIN | 2 |
| | - | 1 | - | | 1008101 | FRAME | 1 |
| | .031 | .021 | .011 | EFFECTIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO |
| | QUANTITY REQUIRED | | | | | LIST OF MATERIALS | |

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MARK PER NO 1002019 BLACK, .100/.140 HIGH AND SERIALIZE PER NO 1002023.
3. BOND FIND NO. 19 TO FIND NO. 1 PER NO 1002004 USING FLEXIBLE FORMULATION OF NASA DRAWING 1010657 AND NASA DRAWING 1010686
4. ASSEMBLE FIND NUMBERS 2, 3, 4 AND 5 PER NO 1002136
5. BOND FIND NOS. 20, 21, 22, 23 AND 24 TO FIND NO. 1 PER NO 1002004 TYPE I, AS NECESSARY
6. ENCAPSULATE PER NO 1002236, SECTION 3.6, CURE CYCLE A FOR -021 CONFIGURATION AND CURE CYCLE A OR B FOR -011 CONFIGURATION USING 1012503, .010 ABOVE TO .050 BELOW PERIPHERAL SURFACES OF TRAY FRAME AND A MINIMUM DEPTH OF .010 ENCAPSULATION OVER ANY COMPONENT. PRIMER TO EXTEND BEYOND ENCAPSULATION MATERIAL, BUT NOT TO EXCEED .188 MAX. MODULE MOUNTING SURFACE TO BE FREE OF PRIMER.
7. SEE CONDUCTOR TERMINATION CHART FOR FIND NO. 19, OR FIND NO. 28
8. ALL AREAS IN THIS VIEW (FRONT END) TO BE COMPLETELY FREE OF ENCAPSULATION MATERIAL INCLUDING CONNECTOR AND PINS IN CONNECTOR. EVIDENCE OF ENCAPSULATION MATERIAL SEEPAGE NOT PERMISSIBLE
9. COAT THREADS OF FIND NO. 16 DURING ASSEMBLY TO FIND NO. 1 WITH MIL-P-8585 (WET ZINC CHROMATE PRIMER)
10. MOUNTING TORQUE FOR FIND NOS. 16 AND 17 TO FIND NO. 1 TO BE 5.0-5.5 IN. LB
11. ALL NICKEL WIRE HARNESS TERMINATIONS TO BE WELDED PER NO 1002005 ALL STRANDED COPPER WIRE HARNESS TERMINATIONS TO BE SOLDERED AS REQUIRED PER NO 1002071. ALL CRIMPED CONTACT PIN TERMINATIONS TO BE INSERTED AT TERMINATION POINTS.
12. PROCURE PER PS 1007141.
13. BOND FIND NOS. 25 AND 26 TO FIND NO. 5 PER NO 1002237. ~~14. CKT 1010622 OR 1010821 CONNECTOR SOCKET HOLES (WITH AND WITHOUT WIRES) WITH NO 1002005 METHOD 5. SEAL OPENING BETWEEN FRAME AND CONNECTOR USING NO 1002004, TYPE I.~~
14. COAT 1010622 OR 1010821 CONNECTOR SOCKET HOLES (WITH AND WITHOUT WIRES) WITH A FORMULATION CONSISTING OF 40 PARTS BY WT. 1010959-1, 100 PARTS BY WT. 1010959-2, AND 7 PARTS BY WT. 1006277 AND CURE AT ROOM TEMPERATURE FOR THREE HOURS OR ONE HOUR AT 140°F. LIMITED AMOUNT ALLOWED TO CONTACT TRAY FRAME. SEAL OPENING BETWEEN FRAME AND CONNECTOR USING NO 1002004, TYPE I.
15. FILL MODULE GUIDE PIN HOLES AND ANY ASSOCIATED CRACKS IN PLATING (AFTER GUIDE PIN INSERTION) USING TYPE I ADHESIVE PER NO 1002004, POTTING SIDE ONLY.

CONTINUED ON SHEET 2

| 1007571 | | |
|---|---|---|
| NEXT ASSY | USED ON | APPLICABLE DASH NO |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS XX ±.02 ANGLES ±1°
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB Cambridge, Mass. DSR no. Contract NAS9-150
DRAWN [illegible] DATE SEP 66
CHECKED [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

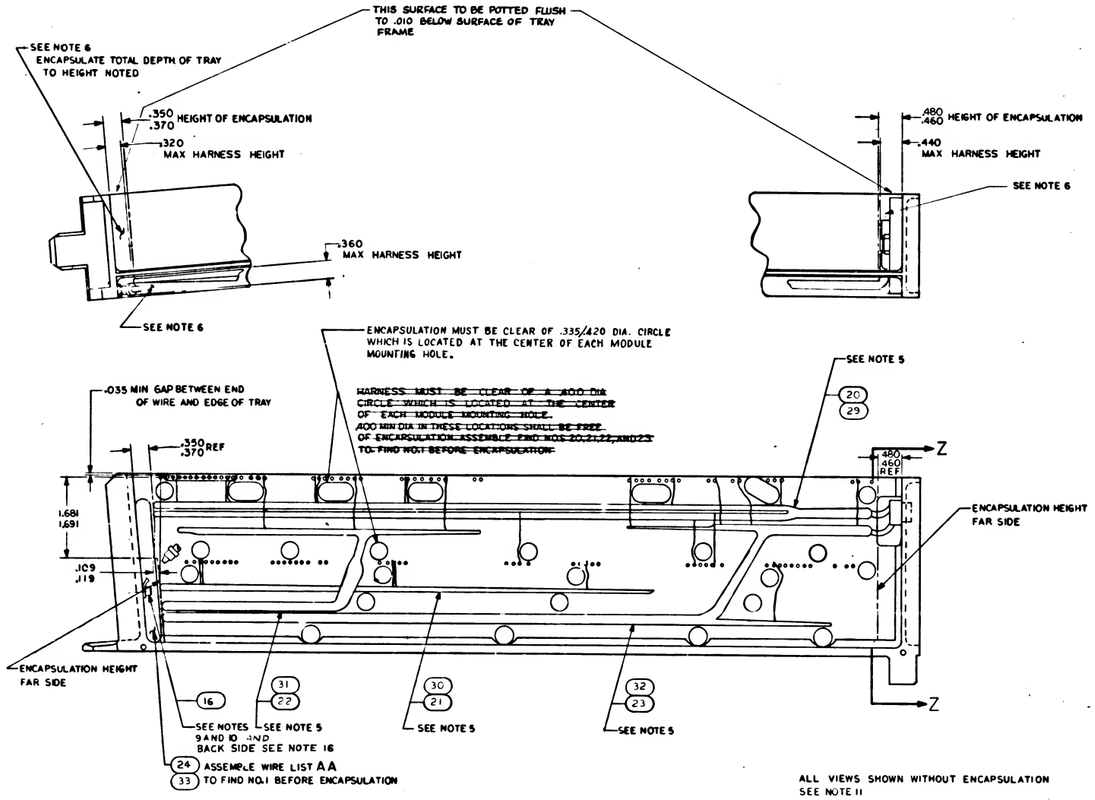
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME ASSEMBLY
TRAY 1

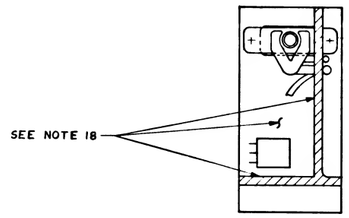
| CODE IDENT NO | SIZE | NASA DRAWING NO |
|---|---|---|
| 80230 | E | 1007531 |
| SCALE 1/1 | WT | SHEET 1 of 2 |

1007531 P

| REVISIONS | | | | |
|---|---|---|---|---|
| SYM | | DESCRIPTION | DATE | APPROVAL |
| | D | REPLACES WORD DWG REV C PER TDRR 1377 | 7/6/64 | WH |
| | E | REVISED PER TDRR 15150 | 9 DEC 64 | WH |
| | F | REVISED PER TDRR 15948 | 11 FEB 65 | WH |
| (M) | G | REVISED PER TDRR 16267 | 25 FEB 65 | WH |
| (M) | H | REVISED PER TDRR 17613 | 28 MAR 66 | WH |
| | J | REVISED PER TDRR 18630 | 4 MAY 66 | WH |
| | K | REVISED PER TDRR 18691 | 6 MAY 66 | WH |
| (E) | L | REVISED PER TDRR 18695 | 11 MAY 66 | WH |
| (G) | M | REVISION STATUS CHANGED PER TDRR 20119 | 15 JUN 66 | WH |
| (M) | N | REVISED PER TDRR 20785 | 20 JULY 66 | WH |
| | P | REVISED PER TDRR 26385 | 23 FEB 68 | WH |


THIS SURFACE TO BE POTTED FLUSH TO .010 BELOW SURFACE OF TRAY FRAME
SEE NOTE 6 ENCAPSULATE TOTAL DEPTH OF TRAY TO HEIGHT NOTED
.350 .370 HEIGHT OF ENCAPSULATION
.320 MAX HARNESS HEIGHT
.360 MAX HARNESS HEIGHT
SEE NOTE 6
.480 .460 HEIGHT OF ENCAPSULATION
.440 MAX HARNESS HEIGHT
SEE NOTE 6
ENCAPSULATION MUST BE CLEAR OF .335/.420 DIA. CIRCLE WHICH IS LOCATED AT THE CENTER OF EACH MODULE MOUNTING HOLE.
HARNESS MUST BE CLEAR OF A .400 DIA CIRCLE WHICH IS LOCATED AT THE CENTER OF EACH MODULE MOUNTING HOLE. .400 MIN DIA IN THESE LOCATIONS SHALL BE FREE OF ENCAPSULATION ASSEMBLE FIND NOS. 20, 21, 22, AND 23 TO FIND NO.1 BEFORE ENCAPSULATION
.035 MIN GAP BETWEEN END OF WIRE AND EDGE OF TRAY
.350 .370 REF
SEE NOTE 5
20
29
Z
.480 .460 REF
ENCAPSULATION HEIGHT FAR SIDE
1.681 1.691
.109 .119
ENCAPSULATION HEIGHT FAR SIDE
16
31
22
30
21
32
23
SEE NOTES 9 AND 10 AND BACK SIDE
SEE NOTE 5
SEE NOTE 5
SEE NOTE 5
SEE NOTE 16
24 ASSEMBLE WIRE LIST AA
33 TO FIND NO.1 BEFORE ENCAPSULATION

ALL VIEWS SHOWN WITHOUT ENCAPSULATION
SEE NOTE 11




SECTION Z-Z

NOTES: (CONTINUED)

16. FILL CAVITY PER ND 1002009, METHOD J.
17. APPLY A BEAD OF SILICONE GREASE MIL-S-8660 BETWEEN THE ROWS OF MALE MALCO PINS IN BOTH DIRECTIONS, BETWEEN THE GASKETS AND THE TRAY FRAME AND AROUND THE PERIMETER OF THE GASKETS ON THE MALCO CONNECTOR. NOMINAL BEAD DIAMETER SHALL BE 1/8 INCH.
18. PAINT THE MODULE MOUNTING SURFACE AND THE SURFACE PERPENDICULAR TO THE MODULE MOUNTING SURFACE PER ND1002292, USING MIL-C-15328 WASH PRIMER FOLLOWED BY MIL-P-8585 ZINC CHROMATE PRIMER, FOLLOWED BY 1012543-003 PAINT. MODULE GUIDE PINS, CONNECTOR FEMALE PINS AND INSULATORS TO BE FREE OF PAINT. SEE FIND NO. 39.
19. BOND FIND NO. 38 TO FIND NO. 34 PER ND1002151, USING ADHESIVE PER MIL-A-25457.

| QTY REQD | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | FIND NO |
|---|---|---|---|
| | | LIST OF MATERIALS | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS ___ DECIMALS ___ ANGLES ___
DO NOT SCALE THIS DRAWING
MATERIAL ___
HEAT TREATMENT ___
FINAL FINISH ___

M I T INSTRUMENTATION LAB Cambridge Mass.
DRAWN R.J.Fox 29 SEP 64
CHECKED Ed Berry 6/27/64
APPROVAL [illegible] 9/27/64
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER HOUSTON TEXAS

FRAME ASSEMBLY TRAY 1

NASA APPROVAL [illegible]
CODE IDENT NO 80230
SIZE E
NASA DRAWING NO 1007531
SCALE 1/1
WT
SHEET 2 OF 2

1007531 P

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

1007531

REVISIONS 12031

| SYM | DESCRIPTION | DATE | APPROVAL |
|---|---|---|---|

DASH NO. 011

| PART NO. | DESCRIPTION | REQD. |
|---|---|---|
| 1008521-001 | Frame, Tray 1 | 1 |
| 1006774 | Insulator, Wrapost, Female Miniature | 149 |
| 1006781-2 | Contact, Wrapost, Female Miniature | 149 |
| 1010382-1 | Contact, Blade Edge Connector | 84 |
| 1010383-1 | Insulator, Wrapost, Male | 84 |
| 1010622-1 | Connector Receptacle | 1 |
| 1010620-4 | Pin, Guide | 20 |
| 1010620-5 | Pin, Guide | 2 |
| 1001317 | Retainer, Jack Screw | 1 |
| 1008172 | Screw, Jack | 30 |
| 1008098 | Screw, Socket Head | 1 |
| 1004206 | Washer Thrust | 60 |
| 1008099-2 | Washer | 1 |
| MS 16995-10 | Screw, Cap, Socket Head | 3 |
| MS 16995-11 | Screw, Cap, Socket Head | 2 |
| MS 21045 C 04 | Nut, Self-Locking Hex | 2 |
| MS 171433 | Pin, Spring | 30 |
| 1004207 | Drive Cylinder | 30 |
| 1007698 | Assembly, Buffer Resistor Module | 1 |
| 1008552-001 | Gasket, Connector | 1 |
| 1008551-001 | Gasket, Connector | 1 |

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|

LIST OF MATERIALS

| | |
|---|---|
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| | |
| | |
| 1007571 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.
DWG. NO. CONTRACT

DRAWN Bacon DATE 7/15/64
CHECKED
APPROVAL
APPROVAL D.A. Test 8/24/64
NASA APPROVAL [illegible] 8/19/64
MIT APPROVAL W Kupfer 2 Sept 64

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

FRAME ASSEMBLY
TRAY 1
(100 SERIES)

CODE IDENT NO. | SIZE C | NASA DRAWING NO. 1007531
SCALE | WT | SHEET 1 OF 1

MASTER

INCHES 0 1 2
PHOTOGRAPHIC SCALE ONLY

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

| REVISIONS 12031 | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPROVAL |
| A | REVISED PER TDRR 13226 | 10-6-64 | RAT WR |

1007571 A (r)

| PART NO. | DESCRIPTION | DASH NO. 011 REQD. | DASH NO. 021 |
|---|---|---|---|
| 1007540-011 | Gimbal Servo Amplifier Module Assembly | 3 | 3 |
| 1007541-011 | Gimbal Coarse Align Amplifier Module Assembly | 3 | 3 |
| 1007542-011 | Power Supply, -28VDC Module Assembly | 1 | 1 |
| 1007543-011 | Auto-Amplitude Controller and Multivibrator (3200 CPS) Module Assembly | 1 | 1 |
| 1007544-011 | Amplifier, 1% (3200 CPS) Module Assembly | 1 | - |
| 1007545-011 | Temperature Controller Power Supply (3200 CPS, 20V) Module Assembly | 1 | 1 |
| 1007531-011 | Frame Assembly, Tray 1 | 1 | - |
| 1007402-011 | Amplifier, 1% (3200 cps) | - | 1 |
| 1007531-021 | Frame Assy, Tray 1 | - | 1 |

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| | | LIST OF MATERIALS | |

| | |
|---|---|
| | |
| | |
| | |
| | |
| | |
| 1007400 | |
| 1007570 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG. NO. CONTRACT
DRAWN Barnes DATE 2/15/64
CHECKED
APPROVAL
APPROVAL A. R. Trout 9/24/64
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

GIMBAL SERVO
ELECTRONICS ASSEMBLY
TRAY 1

| CODE IDENT NO. | SIZE | NASA DRAWING NO. |
|---|---|---|
| | C | 1007571 |
| SCALE | WT | SHEET 1 OF 1 |

INCHES 0 1 2 PHOTOGRAPHIC SCALE ONLY

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(r) B 1007571 (M)

REVISIONS 12031

| SYM | DESCRIPTION | DATE | APPROVAL |
|---|---|---|---|
| A | REVISED PER TDRR 13226 | 10-24 | |
| B | REPLACED BY CONFIGURATION DWG REV C PER TDRR 13939 | 11/4/64 | WR |

| PART NO. | DESCRIPTION | DASH NO. 011 REQD. | DASH NO. 021 |
|---|---|---|---|
| 1007540-011 | Gimbal Servo Amplifier Module Assembly | 3 | 3 |
| 1007541-011 | Gimbal Coarse Align Amplifier Module Assembly | 3 | 3 |
| 1007542-011 | Power Supply, -28VDC Module Assembly | 1 | 1 |
| 1007543-011 | Auto-Amplitude Controller and Multivibrator (3200 CPS) Module Assembly | 1 | 1 |
| 1007544-011 | Amplifier, 1% (3200 CPS) Module Assembly | 1 | - |
| 1007545-011 | Temperature Controller Power Supply (3200 CPS, 20V) Module Assembly | 1 | 1 |
| 1007531-011 | Frame Assembly, Tray 1 | 1 | - |
| 1007402-011 | Amplifier, 1% (3200 cps) | 1 | 1 |
| 1007531-021 | Frame Assy, Tray 1 | | 1 |

(B) REPLACED BY CONFIGURATION DWG REV C

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| | | LIST OF MATERIALS | |

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|---|---|
| | |
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| | |
| 1007400 | |
| 1007570 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS.
DWG NO. CONTRACT

DRAWN Hansen DATE 7/15/64
CHECKED
APPROVAL
APPROVAL D. R. Trask 9/24/64
NASA APPROVAL
MIT APPROVAL 25 Sep 64

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

GIMBAL SERVO
ELECTRONICS ASSEMBLY
TRAY 1

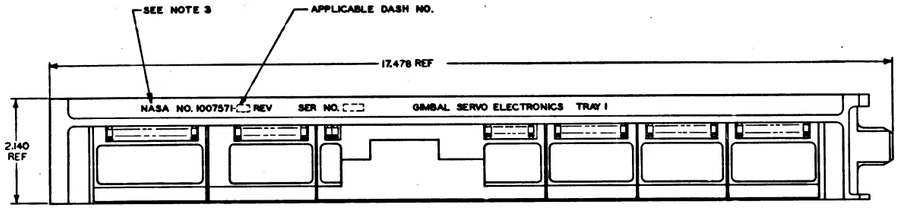
CODE IDENT NO. | SIZE C | NASA DRAWING NO. 1007571
SCALE | WT | SHEET 1 OF 1

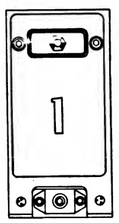
MASTER

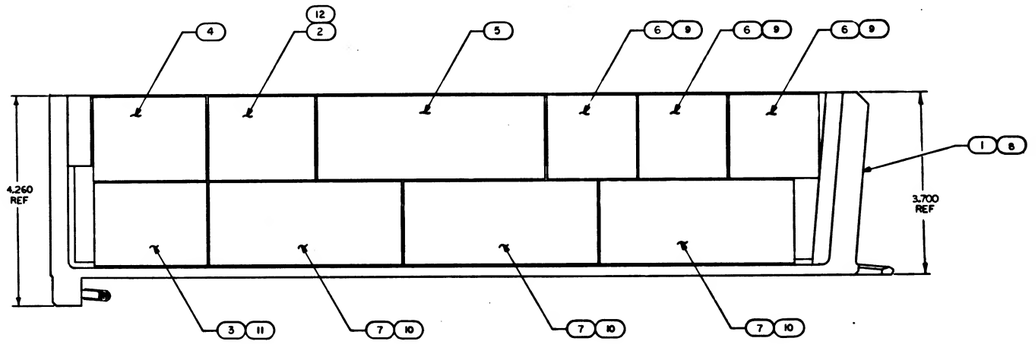
INCHES
0 1 2"
PHOTOGRAPHIC SCALE ONLY

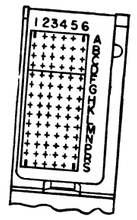
NOTICE - THIS DRAWING OR SPECIFICATION, OR ANY ITEM DESCRIBED THEREIN, CONTAINS INFORMATION WHICH RELATES TO THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE LAWS, TITLE 18, U.S.C., SECTIONS 793 AND 794. THE TRANSMISSION OR REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. NEITHER THIS DRAWING NOR ANY REPRODUCTION OR COPY THEREOF SHALL BE MADE OR RETAINED BY ANY PERSON OR COMPANY UNAUTHORIZED BY THE CONTRACTING OFFICER OF THE GOVERNMENT AGENCY. THIS NOTICE SHALL NOT BE DEFACED OR REMOVED.

| REVISIONS | | | |
|---|---|---|---|
| ZONE | DESCRIPTION | DATE | APPROVAL |
| C | REPLACES WORD DWG REV B PER TDRR 139 59 | 11/16/67 | UK |




© REPLACES WORD DWG REV B

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE TO SECURE FIND NOS. 2,3,4,5,6,7,8,9,10 & 11 TO FIND NO. 1 OR NO. 8 AS APPLICABLE TO BE 13–17 IN. LB
3. MARK PER ND1002019 (WHITE) .100/.140 HIGH & SERIALIZE PER ND1002023.

| QUANTITY REQUIRED | | | SPEC-TIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|---|---|---|
| | – | 1 | | 1007545-021 | TEMP CONT PWR SUP 3200 CPS, 20V | 12 |
| | 1 | – | | 1007402-011 | AMPL 1% 3200 CPS | 11 |
| | – | 3 | | 1007540-021 | GIMBAL SERVO AMPL | 10 |
| | – | 3 | | 1007541-021 | GIMBAL COARSE ALIGN AMPL | 9 |
| | 1 | – | | 1007531-021 | FRAME ASSEMBLY | 8 |
| | 3 | – | | 1007540-011 | GIMBAL SERVO AMPL | 7 |
| | 3 | – | | 1007541-011 | GIMBAL COARSE ALIGN AMPL | 6 |
| | 1 | 1 | | 1007542-011 | POWER SUPPLY-PRVDC | 5 |
| | 1 | 1 | | 1007543-011 | AAC FILTER & MVB (3200 CPS) | 4 |
| | – | 1 | | 1007544-011 | AMPL 1% 3200 CPS | 3 |
| | 1 | – | | 1007545-011 | TEMP CONT PWR SUP 3200 CPS, 20V | 2 |
| | – | 1 | | 1007531-011 | FRAME ASSEMBLY | 1 |

LIST OF MATERIALS

| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
|---|---|---|
| 1007570 | | |
| 1007400 | | |

APPLICATION

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB
Contract NAS 9-497
DRAWN — DATE 10-5-66
CHECKED — DATE 10-5-66
APPROVED — DATE 10-5-66
NASA APPROVAL — DATE 11-4-66
MIT APPROVAL — DATE 11-4-66

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

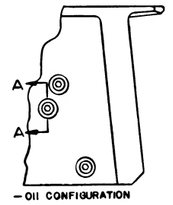
# GIMBAL SERVO ELECTRONICS ASSEMBLY, TRAY 1

CODE IDENT NO. | SIZE E | NASA DRAWING NO. 1007571
SCALE 1/1 | WT | SHEET 1 OF 1

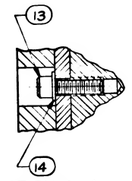
1007571

MASTER

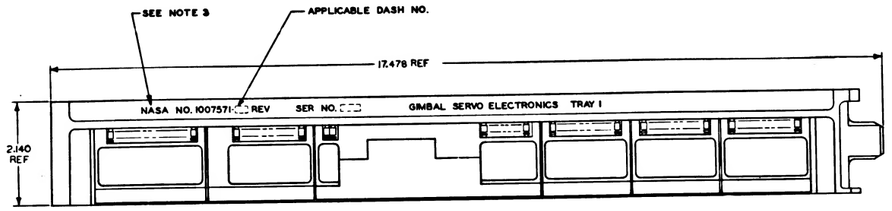
| REVISIONS | | | |
|---|---|---|---|
| DWG | DESCRIPTION | DATE | APPROVAL |
| C | REPLACES WORD DWG REV B PER TDRR 23937 | 11-4-68 | LK |
| D | REVISED PER TDRR 15949 | 8-5-68 -5 | DAS |

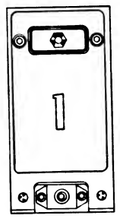


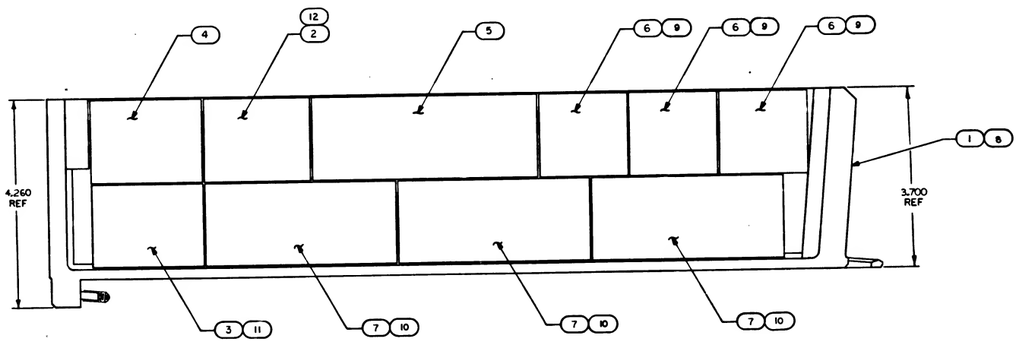

-011 CONFIGURATION

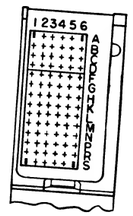



SECTION A-A
SCALE 2/1
-011 CONFIGURATION






© REPLACES WORD DWG REV B

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE TO SECURE FIND NOS. 2,3,4,5,6,7,9,10 & 11 TO FIND NO. 1 OR NO. 8 AS APPLICABLE TO BE 25-30 IN. LB
3. MARK PER ND1002019 (WHITE) .100/.140 HIGH & SERIALIZE PER ND1002023.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | - | 30 | | MS 15795-805 | WASHER, FLAT | 14 |
| | | - | 30 | | NAS 1352-06-8 | SCREW, CAP, SOCKET HEAD | 13 |
| | | - | 1 | | 1007545-021 | TEMP CONT PWR SUP 3200 CPS, 20V | 12 |
| | | 1 | - | | 1007402-011 | AMPL 1% 3200 CPS | 11 |
| | | - | 3 | | 1007540-021 | GIMBAL SERVO AMPL | 10 |
| | | - | 3 | | 1007541-021 | GIMBAL COARSE ALIGN AMPL | 9 |
| | | - | 3 | | 1007531-021 | FRAME ASSEMBLY | 8 |
| | | 1 | - | | 1007540-011 | GIMBAL SERVO AMPL | 7 |
| | | 3 | - | | 1007541-011 | GIMBAL COARSE ALIGN AMPL | 6 |
| | | 3 | - | | 1007542-011 | POWER SUPPLY-28VDC | 5 |
| | | 1 | 1 | | 1007543-011 | AAC FILTER & MVB (3200 CPS) | 4 |
| | | 1 | 1 | | 1007544-011 | AMPL 1% 3200 CPS | 3 |
| | | - | 1 | | 1007545-011 | TEMP CONT PWR SUP 3200 CPS, 20V | 2 |
| | | 1 | - | | 1007531-011 | FRAME ASSEMBLY | 1 |
| | | - | 1 | | | | |
| | | 021 | 011 | EFFECTIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO |
| | | QUANTITY REQUIRED | | | LIST OF MATERIALS | | |

| | | |
|---|---|---|
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| | | |
| | | |
| | | |
| 1007570 | | |
| 1007400 | | |
| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS.
CONTRACT NAS 9-497

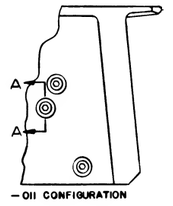
DRAWN [illegible] DATE 10 Sept 68
CHECKED [illegible] 9 OCT 68
APPROVAL [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

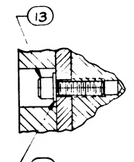
# GIMBAL SERVO ELECTRONICS ASSEMBLY, TRAY 1

| CODE IDENT NO | SIZE | NASA DRAWING NO |
|---|---|---|
| | E | 1007571 |
| SCALE 1/1 | WT | SHEET 1 OF 1 |

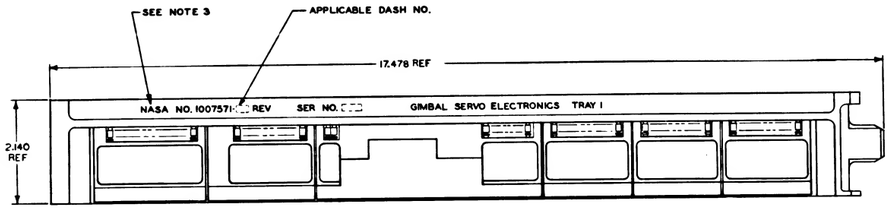
| SYM | DESCRIPTION | DATE | APPROVAL |
|---|---|---|---|
| C | REPLACES WORD DWG REV B PER TLRR 13933 | 3-4-68 | |
| D | REVISED PER TDRR 15949 | 6 FEB 68 | |
| E | REVISED PER TDRR 16859 | 5-12-68 | |

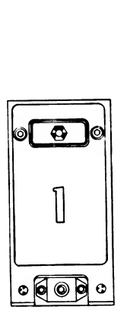


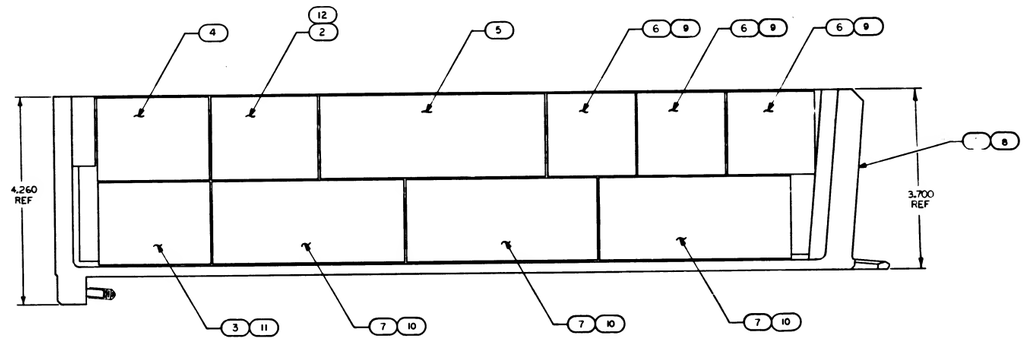

-011 CONFIGURATION

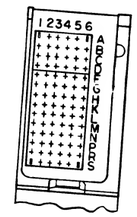



SECTION A-A
SCALE 2/1
-011 CONFIGURATION

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NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MOUNTING TORQUE TO SECURE FIND NOS. 2,3,4,5,6,7,8,9,10 & 11 TO FIND NO. 1 OR NO. 8 AS APPLICABLE TO BE 25-30 IN. LB
3. MARK PER ND1002019 (WHITE) .100 / .140 HIGH & SERIALIZE PER ND1002023.
4. APPLY THIN LAYER OF THERMAL SILICONE COMPOUND FIND NO 15 TO THE HEATSINK PORTION OF THE MOUNTING FACE OF ALL MODULES. AFTER ASSEMBLY OF THE MODULES ON THE TRAY, THE COMPOUND SHALL NOT BE VISIBLE ON THE EXPOSED SURFACES OF THE MODULES AND TRAY. CLEANING IS PERMITTED.

SEE NOTE 4

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | AR | AR | | 1006879 | SILICONE COMPOUND | 15 |
| | | - | 30 | | MS 15795-805 | WASHER, FLAT | 14 |
| | | - | 30 | | NAS 1352-06-8 | SCREW, CAP, SOCKET HEAD | 13 |
| | | - | 1 | | 1007545-021 | TEMP CONT PWR SUP 3200 CPS, 20V | 12 |
| | | 1 | - | | 1007402-011 | AMPL 1% 3200 CPS | 11 |
| | | - | 3 | | 1007540-321 | GIMBAL SERVO AMPL | 10 |
| | | - | 3 | | 1007541-021 | GIMBAL COARSE ALIGN AMPL | 9 |
| | | 1 | - | | 1007531-021 | FRAME ASSEMBLY | 8 |
| | | 3 | - | | 1007540-011 | GIMBAL SERVO AMPL | 7 |
| | | 3 | - | | 1007541-011 | GIMBAL COARSE ALIGN AMPL | 6 |
| | | 1 | 1 | | 1007542-011 | POWER SUPPLY-28VDC | 5 |
| | | 1 | 1 | | 1007543-011 | AAC FILTER & MVB (3200 CPS) | 4 |
| | | - | 1 | | 1007544-011 | AMPL 1% 3200 CPS | 3 |
| | | 1 | - | | 1007545-011 | TEMP CONT PWR SUP 3200 CPS, 20V | 2 |
| | | - | 1 | | 1007531-011 | FRAME ASSEMBLY | 1 |
| | | 021 | 011 | EFFECTIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
| QUANTITY REQUIRED | | | | | LIST OF MATERIALS | | |

1007570
1007400

| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
|---|---|---|
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± —  DECIMALS ± —  ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS. CONTRACT NAS 9-697
DRAWN [signature] DATE 6 Feb 68
CHECKED [signature]
APPROVAL [signature]
APPROVAL [signature]

NASA APPROVAL [signature]
MIT APPROVAL [signature]

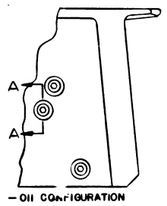
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

# GIMBAL SERVO ELECTRONICS ASSEMBLY, TRAY 1

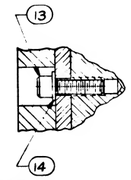
| CODE IDENT NO | SIZE | NASA DRAWING NO |
|---|---|---|
| | E | 1007571 |
| SCALE 1/1 | WT | SHEET 1 OF 1 |

1007571

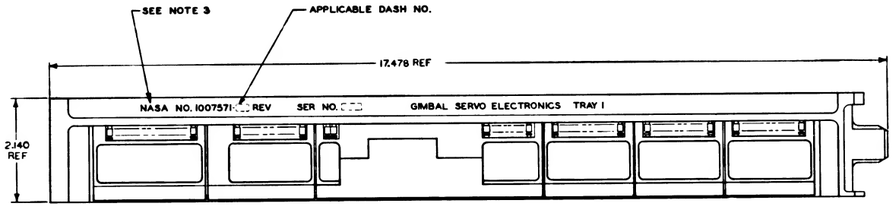
| REVISIONS | | | | |
|---|---|---|---|---|
| DWG | | DESCRIPTION | DATE | APPROVAL |
| C | | REPLACES WORD DWG REV B PER TLRA 159 59 | 7 JAN 65 | WK |
| D | | REVISED PER TDRR 15949 | 8 FEB 65 | DAS |
| E | | REVISED PER TDRR 16859 | 26 MAR 65 | WO |
| F | | REVISED PER TDRR 18518 | 26 APR 65 | RJJ |

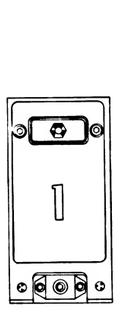


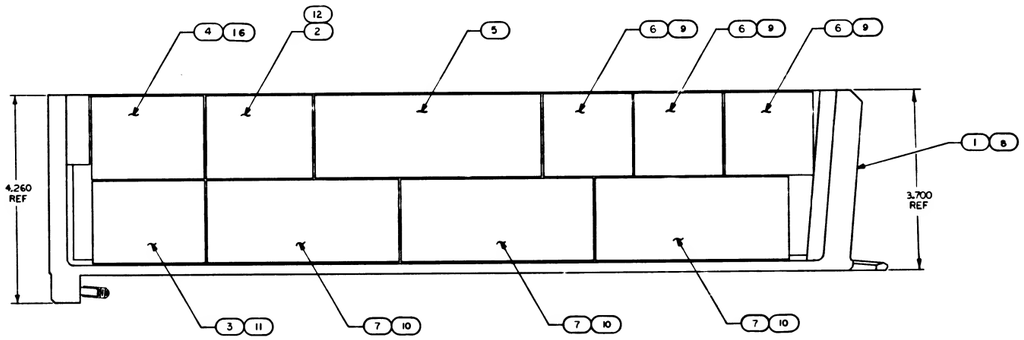

-011 CONFIGURATION

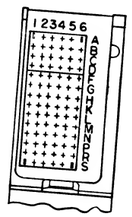



SECTION A-A
SCALE 2/1
-011 CONFIGURATION




© REPLACES WORD DWG REV B

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE TO SECURE FIND NOS. 2,3,4,5,6,7,9,10 & 11 TO FIND NO. 1 OR NO. 8 AS APPLICABLE TO BE 25-30 IN. LB
3. MARK PER ND1002019 (WHITE) .100/.140 HIGH & SERIALIZE PER ND1002023.
4. APPLY THIN LAYER OF THERMAL SILICONE COMPOUND FIND NO. 15 TO THE HEATSINK PORTION OF THE MOUNTING FACE OF ALL MODULES. AFTER ASSEMBLY OF THE MODULES ON THE TRAY, THE COMPOUND SHALL NOT BE VISIBLE ON THE EXPOSED SURFACES OF THE MODULES AND TRAY. CLEANING IS PERMITTED.

LIST OF MATERIALS

| FIND NO | NOMENCLATURE OR DESCRIPTION | PART OR IDENTIFYING NO. | EFFECTIVITY 021 | EFFECTIVITY 011 | QUANTITY REQUIRED | |
|---|---|---|---|---|---|---|
| 16 | AAC FILTER B MVB (3200 CPS) | 1007543-021 | | | – | 1 |
| 15 | SILICONE COMPOUND | 1006879 | | | AR | AR |
| 14 | WASHER, FLAT | MS 15795-805 | | | – | 30 |
| 13 | SCREW, CAP, SOCKET HEAD | NAS 1352-06-8 | | | – | 30 |
| 12 | TEMP CONT PWR SUP 3200 CPS, 20V | 1007545-021 | | | – | 1 |
| 11 | AMPL 1% 3200 CPS | 1007402-011 | | | 1 | – |
| 10 | GIMBAL SERVO AMPL | 1007540-021 | | | – | 3 |
| 9 | GIMBAL COARSE ALIGN AMPL | 1007541-021 | | | – | 3 |
| 8 | FRAME ASSEMBLY | 1007531-021 | | | 1 | – |
| 7 | GIMBAL SERVO AMPL | 1007540-011 | | | 3 | – |
| 6 | GIMBAL COARSE ALIGN AMPL | 1007541-011 | | | 3 | – |
| 5 | POWER SUPPLY-28VDC | 1007542-011 | | | 1 | 1 |
| 4 | AAC FILTER E MVB (3200 CPS) | 1007543-011 | | | 1 | – |
| 3 | AMPL 1% 3200 CPS | 1007544-011 | | | – | 1 |
| 2 | TEMP CONT PWR SUP 3200 CPS, 20V | 1007545-011 | | | 1 | – |
| 1 | FRAME ASSEMBLY | 1007531-011 | | | – | 1 |

SEE NOTE 4

| | | |
|---|---|---|
| 1007570 | | |
| 1007400 | | |
| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

MIT INSTRUMENTATION LAB
CAMBRIDGE MASS.

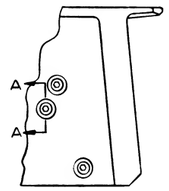
DRAWN [illegible] DATE 8 Sept 64
CHECKED [illegible] 5 OCT 64
APPROVAL [illegible] 8 OCT 64
APPROVAL [illegible] 1 NOV 64
NASA APPROVAL [illegible]
MIT APPROVAL [illegible]

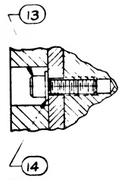
MANNED SPACECRAFT CENTER
HOUSTON TEXAS

# GIMBAL SERVO ELECTRONICS ASSEMBLY, TRAY 1

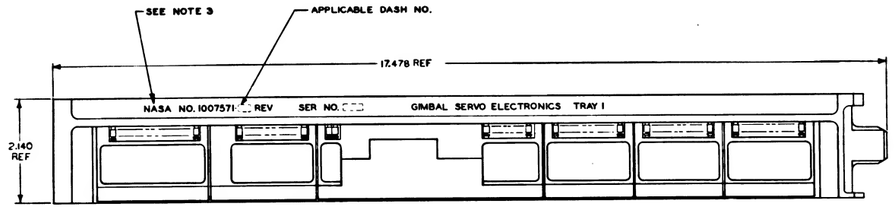
CODE IDENT NO 80230 | SIZE E | NASA DRAWING NO 1007571
SCALE 1/1 | WT | SHEET 1 OF 1

| SYM | REVISIONS | DATE | APPROVAL |
|---|---|---|---|
| C | REPLACES WORD DWG PER TLRR 739.32 REV B | 7-1-64 | [illegible] |
| D | REVISED PER TDRR 7949 | 8 FEB 65 | DAS |
| E | REVISED PER TDR2 7959 | 5 MAR 65 | HTO |
| F | REVISED PER TDRR 18518 | 28 APR 65 | RJJ |
| G | REVISED PER TDRR 21 9 | 9 JUN 65 | [illegible] |



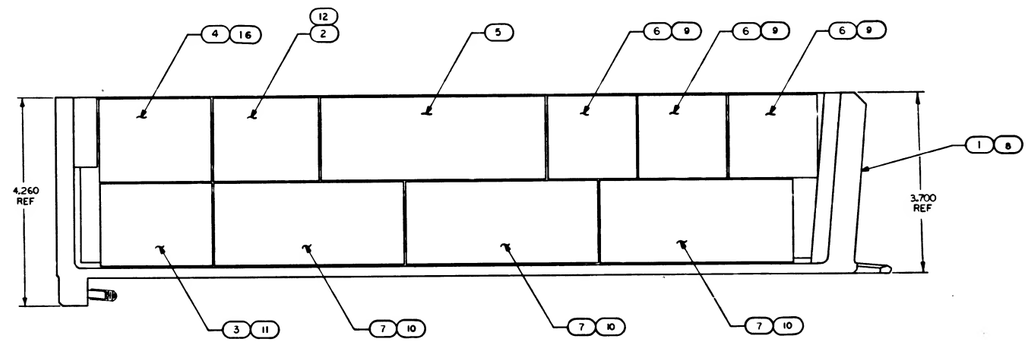



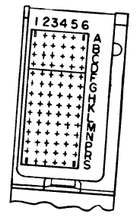

SECTION A-A
SCALE 2/1










© REPLACES WORD DWG REV B

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE TO SECURE FIND NOS. 2,3,4,5,6,7,9,10 & 11 TO FIND NO. 1 OR NO. 8 AS APPLICABLE TO BE 25-30 IN. LB
3. MARK PER ND1002019 (WHITE) .100/.140 HIGH & SERIALIZE PER ND1002023.
4. APPLY THIN LAYER OF THERMAL SILICONE COMPOUND FIND NO. 15 TO THE HEATSINK PORTION OF THE MOUNTING FACE OF ALL MODULES. AFTER ASSEMBLY OF THE MODULES ON THE TRAY, THE COMPOUND SHALL NOT BE VISIBLE ON THE EXPOSED SURFACES OF THE MODULES AND TRAY. CLEANING IS PERMITTED.

SEE NOTE 4

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | - | 1 | | 1007543-021 | AAC FILTER & MVB (3200 CPS) | 16 |
| | | AR | AR | | 1006879 | SILICONE COMPOUND | 15 |
| | | 20 | 30 | | MS 15795-805 | WASHER, FLAT | 14 |
| | | 30 | 30 | | NAS 1352-06-8 | SCREW, CAP, SOCKET HEAD | 13 |
| | | - | 1 | | 1007545-021 | TEMP CONT PWR SUP 3200 CPS, 20V | 12 |
| | | 1 | - | | 1007402-011 | AMPL 1% 3200 CPS | 11 |
| | | - | 3 | | 1007540-021 | GIMBAL SERVO AMPL | 10 |
| | | - | 3 | | 1007541-021 | GIMBAL COARSE ALIGN AMPL | 9 |
| | | 1 | - | | 1007531-021 | FRAME ASSEMBLY | 8 |
| | | 3 | - | | 1007540-011 | GIMBAL SERVO AMPL | 7 |
| | | 3 | - | | 1007541-011 | GIMBAL COARSE ALIGN AMPL | 6 |
| | | 1 | 1 | | 1007542-011 | POWER SUPPLY-28VDC | 5 |
| | | - | 1 | | 1007543-011 | AAC FILTER & MVB (3200 CPS) | 4 |
| | | - | 1 | | 1007544-011 | AMPL 1% 3200 CPS | 3 |
| | | 1 | - | | 1007545-011 | TEMP CONT PWR SUP 3200 CPS, 20V | 2 |
| | | - | 1 | | 1007531-011 | FRAME ASSEMBLY | 1 |
| | | 021 | 011 | EFFECTIVITY | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
| QUANTITY REQUIRED | | | | | LIST OF MATERIALS | | |

| | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| 1007570 | | |
| 1007400 | | |
| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± —  DECIMALS ± —  ANGLES ± —
DO NOT SCALE THIS DRAWING
MATERIAL —
HEAT TREATMENT —
FINAL FINISH —

M I T
INSTRUMENTATION LAB
CAMBRIDGE MASS.
CONTRACT NAS 9-150

DRAWN [illegible] DATE 15 Sept 64
CHECKED [illegible]
APPROVAL [illegible]
NASA APPROVAL [illegible] 9-4-64
MIT APPROVAL [illegible]

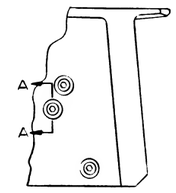
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

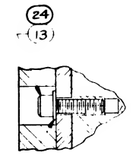
# GIMBAL SERVO ELECTRONICS ASSEMBLY, TRAY 1

| CODE IDENT NO. | SIZE | NASA DRAWING NO. |
|---|---|---|
| 80230 | E | 1007571 |
| SCALE 1/1 | WT | SHEET 1 OF 1 |

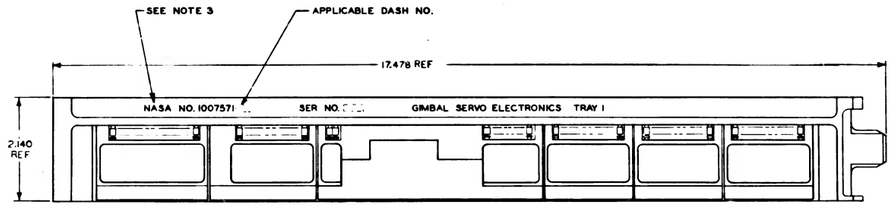
1007571

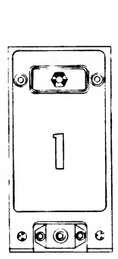
| REVISIONS | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPROVAL |
| C | REPLACES WORD DWG REV B PER TDRR 15349 | 4 JAN 65 | WH |
| D | REVISED PER TDRR 15949 | 8 FEB 65 | DAS |
| E | REVISED PER TDRR 16859 | 4 MAR 65 | HTO |
| F | REVISED PER TDRR 18518 | 26 APR 65 | RJJ |
| G | REVISED PER TDRR 20119 | 17 JUN 65 | RJP |
| H | REVISED PER TDRR 26388 | 23 FEB 66 | DKD |

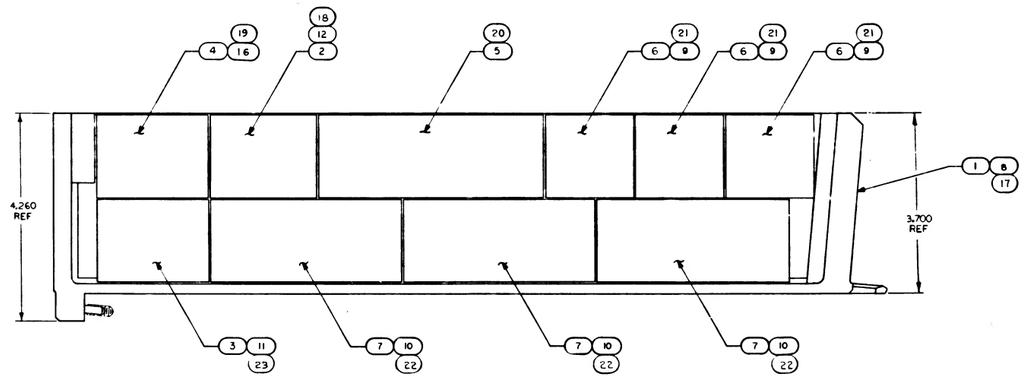


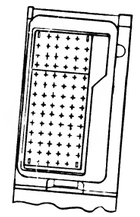




SECTION A-A
SCALE 2/1



NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE TO SECURE FIND NOS. 2345679 (11 18) 10 12 (23 10 FIND NO.), NO 8 OR NO.17 AS APPLICABLE TO BE 25-30 IN. LB.
3. MARK PER ND1002019 (WHITE) 100/140 HIGH & SERIALIZE PER ND1002023.
4. APPLY THIN LAYER OF THERMAL SILICONE COMPOUND FIND NO 15 TO THE HEATSINK PORTION OF THE MOUNTING FACE OF ALL MODULES. AFTER ASSEMBLY OF THE MODULES ON THE TRAY, THE COMPOUND SHALL NOT BE VISIBLE ON THE EXPOSED SURFACES OF THE MODULES AND TRAY. CLEANING IS PERMITTED.
5. APPLY A THIN LAYER OF THERMAL SILICONE COMPOUND FIND NO 25 TO THE MODULE MOUNTED CAVITY PAINTED SURFACES AND THE HEATSINK PORTION OF THE MOUNTING FACE OF ALL MODULES.

© REPLACES WORD DWG REV B

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | SEE NOTE 5 | MOISTURE-PROOFING | 26 |
| SEE NOTE 5 | AR | | | | 1006879 | SILICONE COMPOUND | 25 |
| | 30 | | | | 1008861-018 | SCREW, CAP, SOCKET HEAD | 24 |
| | 1 | | | | 1007544-021 | AMPL 1% 3200 CSP | 23 |
| | 3 | | | | 1007540-031 | GIMBAL SERVO AMPL | 22 |
| | 3 | | | | 1007541-031 | GIMBAL COARSE ALIGN AMPL | 21 |
| | 1 | | | | 1007542-021 | POWER SUPPLY -28 VDC | 20 |
| | 1 | | | | 1007543-031 | AAC FILTER MVB (3200 CSP) | 19 |
| | 1 | | | | 1007545-031 | TEMP CONT PWR SUP 3200CPS 20V | 18 |
| | 1 | | | | 1007531-031 | FRAME ASSEMBLY | 17 |
| | | - | 1 | | 1007543-021 | AAC FILTER & MVB (3200 CPS) | 16 |
| SEE NOTE 4 | | AR | AR | | 1006879 | SILICONE COMPOUND | 15 |
| | 30 | 30 | 30 | | MS 15795-805 | WASHER, FLAT | 14 |
| | | 30 | 30 | | NAS 1352-06-8 | SCREW, CAP, SOCKET HEAD | 13 |
| | | - | - | | 1007545-021 | TEMP CONT PWR SUP 3200 CPS, 20V | 12 |
| | | 1 | - | | 1007402-011 | AMPL 1% 3200 CPS | 11 |
| | | - | 3 | | 1007540-021 | GIMBAL SERVO AMPL | 10 |
| | | - | 3 | | 1007541-021 | GIMBAL COARSE ALIGN AMPL | 9 |
| | | 1 | - | | 1007531-021 | FRAME ASSEMBLY | 8 |
| | | 3 | - | | 1007540-011 | GIMBAL SERVO AMPL | 7 |
| | | 3 | - | | 1007541-011 | GIMBAL COARSE ALIGN AMPL | 6 |
| | | 1 | 1 | | 1007542-011 | POWER SUPPLY-28VDC | 5 |
| | | 1 | - | | 1007543-011 | AAC FILTER & MVB (3200 CPS) | 4 |
| | | - | 1 | | 1007544-011 | AMPL 1% 3200 CPS | 3 |
| | | 1 | - | | 1007545-011 | TEMP CONT PWR SUP 3200 CPS, 20V | 2 |
| | | - | 1 | | 1007531-011 | FRAME ASSEMBLY | 1 |
| | 031 | 021 | 011 | EFFECTIVITY | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION | FIND NO |

QUANTITY REQUIRED — LIST OF MATERIALS

| | | |
|---|---|---|
| 1007570 | | |
| 1007400 | | |
| NEXT ASSY | USED ON | APPLICABLE DASH NO |
| APPLICATION | | |

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON FRACTIONS — DECIMALS — ANGLES
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

M I T INSTRUMENTATION LAB CAMBRIDGE MASS.

DRAWN — DATE 4 Jan 65
CHECKED
APPROVED — DATE
APPROVAL
NASA APPROVAL
MIT APPROVAL

MANNED SPACECRAFT CENTER
HOUSTON TEXAS

# GIMBAL SERVO ELECTRONICS ASSEMBLY, TRAY 1

| CODE IDENT NO | SIZE | NASA DRAWING NO |
|---|---|---|
| 80230 | E | 1007571 |

SCALE 1/1 — WT — SHEET 1 OF 1

1007571

NOTICE — WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

DASH NO. 011

| PART NO. | DESCRIPTION | REQD. |
|---|---|---|
| 1007540-011 | Gimbal Servo Amplifier Module Assembly | 3 |
| 1007541-011 | Gimbal Coarse Align Amplifier Module Assembly | 3 |
| 1007542-011 | Power Supply, -28VDC Module Assembly | 1 |
| 1007543-011 | Auto-Amplitude Controller and Multivibrator (3200 CPS) Module Assembly | 1 |
| 1007544-011 | Amplifier, 1% (3200 CPS) Module Assembly | 1 |
| 1007545-011 | Temperature Controller Power Supply (3200 CPS, 20V) Module Assembly | 1 |
| 1007531-011 | Frame Assembly, Tray 1 | 1 |

REVISIONS 12-31

| SYM | DESCRIPTION | DATE | APPROVAL |
|---|---|---|---|

1007571

APPLICATION — USED ON — NEXT ASSY 1007570

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ±
DO NOT SCALE THIS DRAWING
MATERIAL
HEAT TREATMENT
FINAL FINISH

QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO.

LIST OF MATERIALS

MIT INSTRUMENTATION LAB, CAMBRIDGE, MASS. — CONTRACT — DWG. NO.
DRAWN Bowen DATE 2/xx/64
CHECKED
APPROVAL
APPROVAL A. L. Hoag

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

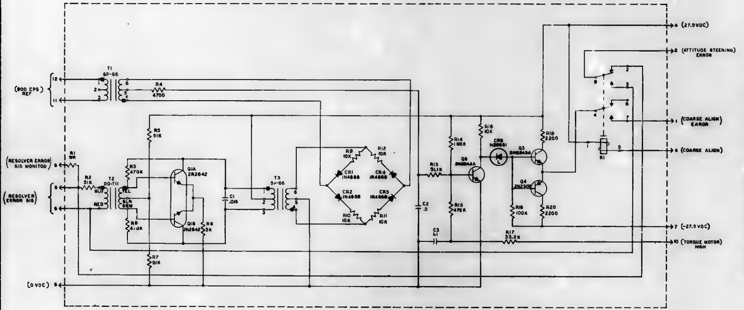
GIMBAL SERVO
ELECTRONICS ASSEMBLY
TRAY 1
(100 SERIES)

NASA APPROVAL
MIT APPROVAL

CODE IDENT NO. | SIZE C | NASA DRAWING NO. 1007571
SCALE | WT | SHEET 1 OF 1

INCHES
0 1 2
PHOTOGRAPHIC SCALE ONLY

[redacted]




| REF DES | PART NO. | DESCRIPTION | VALUE | TOL | RATING |
|---|---|---|---|---|---|
| R1 | 1006750-[illegible] | RESISTOR | [illegible] | [illegible] | 1/4W |
| R2 | 1006750-73 | ↓ | 51K | [illegible] | [illegible] |
| R3 | 1010[illegible]-97 | | 470K | [illegible] | [illegible] |
| R4 | 1006750-48 | | 4700 | [illegible] | [illegible] |
| R5 | 1006750-73 | | 51K | [illegible] | [illegible] |
| R6 | 1010[illegible]-9 | | 470K | [illegible] | [illegible] |
| R7 | 1006750-73 | | 51K | [illegible] | [illegible] |
| R8 | 1006750-45 | | 3K | [illegible] | [illegible] |
| R9 | 1010364-443 | | 10K | ±1% | 1/8W |
| R10 | 1010364-443 | | 10K | ↓ | ↓ |
| R11 | 1010364-443 | | 10K | | |
| R12 | 1010364-443 | | 10K | | |
| R13 | 1010364-579 | | 51.1K | ↓ | ↓ |
| R14 | [illegible] | | 1 MEG | [illegible] | [illegible] |
| R15 | 1010364-7[illegible] | | 475K | ±1% | [illegible] |
| R16 | 1006750-[illegible] | | 10K | [illegible] | [illegible] |
| R17 | 1010364-[illegible] | | 33.2K | [illegible] | [illegible] |
| R18 | 1006750-[illegible] | | 100K | [illegible] | [illegible] |
| R19 | 1010279-71 | | 2200 | [illegible] | [illegible] |
| R20 | 1010279-71 | ↓ | 2200 | [illegible] | [illegible] |
| | | | | | |
| C1 | 1010264-15 | CAPACITOR | 0.015 | ±5% | [illegible] |
| C2 | 1010279-22[illegible] | ↓ | .5 | [illegible] | [illegible] |
| C3 | [illegible] | | .1 | [illegible] | [illegible] |
| | | | | | |
| CR1 | 1010[illegible]-1 | DIODE | [illegible] | | [illegible] |
| CR2 | -1 | ↓ | ↓ | | |
| CR3 | -1 | | | | |
| CR4 | -1 | | | | |
| CR5 | [illegible]72-22 | ↓ | [illegible] | | |
| | | | | | |
| Q1 | 1010252-[illegible] | TRANSISTOR | 2N2642 | | |
| Q2 | 10102[illegible] | ↓ | [illegible] | | |
| Q3 | 10102[illegible] | | [illegible] | | |
| Q4 | 10103[illegible]-1 | ↓ | [illegible] | | |
| | | | | | |
| T1 | 1010[illegible]-1 | TRANSFORMER | SP-66 | | |
| T2 | 1010[illegible] | ↓ | OO-T11 | | |
| T3 | 1010[illegible]-1 | ↓ | SP-66 | | |
| | | | | | |
| K1 | 1010[illegible]53-1 | RELAY | | | |

REFERENCE DRAWINGS
GIMBAL COARSE ALIGN AMPLIFIER MODULE ASSY [illegible]

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. UNLESS OTHERWISE NOTED RESISTOR VALUES ARE IN OHMS
3. UNLESS OTHERWISE NOTED CAPACITOR VALUES ARE IN MICROFARADS

LIST OF MATERIALS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

DO NOT SCALE THIS DRAWING

MIT INSTRUMENTATION LAB

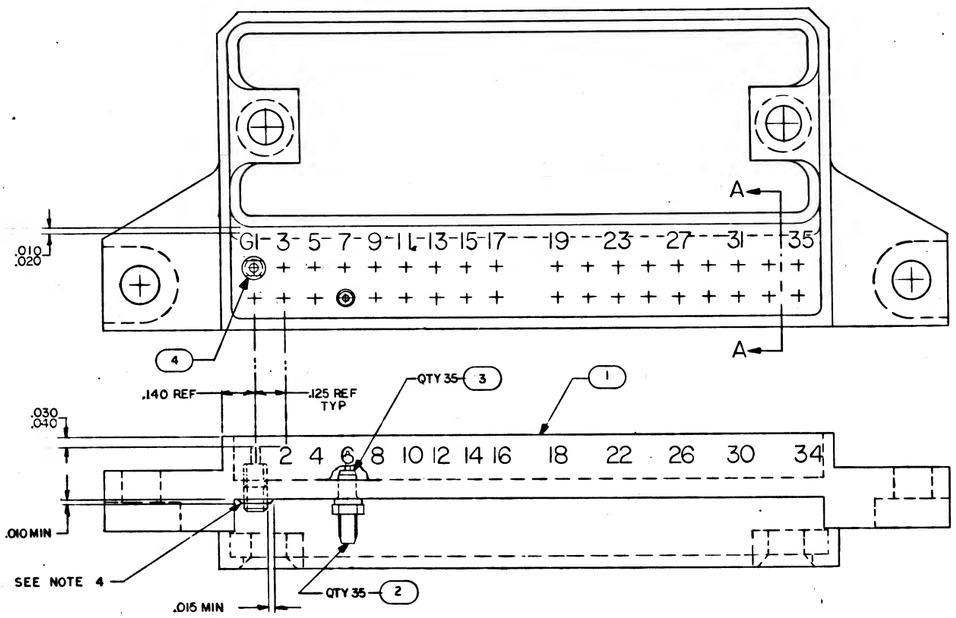
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

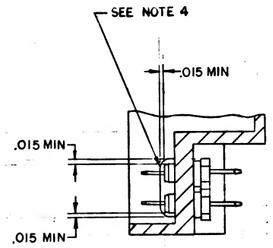
SCHEMATIC
GIMBAL COARSE
ALIGN AMPLIFIER

E 1009524

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY BE IN ANY WAY BE RELATED THEREIN.

| REVISIONS 20273 | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | DR | CHK | DATE | APPROVED |




SECTION A-A

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MOUNTING TORQUE FOR FIND NO.4 TO BE 15-20 INCH OUNCES.
3. ASSEMBLE FIND NO.2 AND FIND NO.3 TO FIND NO.1 PER ND1002136
4. SEAL FIND NO. 2,3 AND 4 TO FIND NO.1 PER ND1002004, TYPE VI
5. MARK .080/.100 HIGH WHITE CHARACTERS PER ND1002019, USING INK 1006271-1
6. IDENTIFY WITH DRAWING NO. AND REVISION PER ND1002019

| QTY REQD | PART OR IDENTIFYING NO. | MATERIAL OR NOTES | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|---|
| 1 | 2004039 | | TERMINAL, THREADED | 4 |
| 35 | 1006775 | | INSULATOR, WRAPOST-MALE, MINATURE | 3 |
| 35 | 1006782-1 | | CONTACT, WRAPOST-MALE, MINATURE | 2 |
| 1 | 2004925 | | HEADER | 1 |

011 LIST OF MATERIALS

| | |
|---|---|
| 2003909 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± ANGLES ± 1°
DO NOT SCALE THIS DRAWING

MATERIAL

MASTER

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN R. CUCUWELLS 9 SEP 65
CHECKED D. Logan 9 Sep 65
APPROVED [illegible] 11 Jan 65
APPROVED [illegible] 21 Jan 65

HEADER ASSEMBLY
KEYBOARD MODULE
AGC DSKY

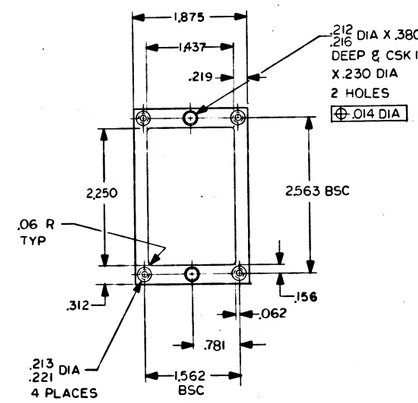
APPROVED MIT [illegible] 12 Jan 65
APPROVED MSC [illegible] 4/21/65

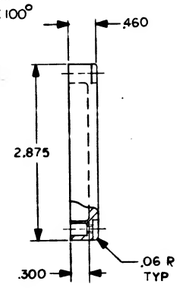
CODE IDENT NO. 80230 | SIZE D | DRAWING NO. 2003918
DATE | SCALE 4/1 | SHEET 1 OF 1

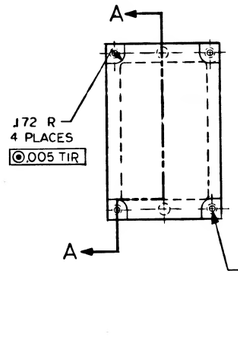
2003918

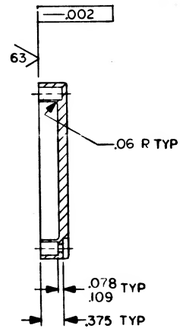
NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

| REVISIONS 21166 | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | DR | CHK | DATE | APPROVED |




SECTION A-A

NOTES
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM ALLOY ZK60A-T5 PER QQ-M-31, TEMP 5
3. FINISH: ANODIZE MIL-M-45202, TYPE I, CLASS C
4. REMOVE BURRS AND BREAK SHARP EDGES .005/.015
5. ALL SURFACES 125 UNLESS OTHERWISE SPECIFIED

MASTER

| QTY REQD | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|
| | | LIST OF MATERIALS | |
| | 2004115 | | |
| NEXT ASSY | USED ON | | |
| APPLICATION | | | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± —  DECIMALS .XX ±.02 .XXX ±.005  ANGLES ± —
DO NOT SCALE THIS DRAWING

MATERIAL
SEE NOTE 2

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

DRAWN
CHECKED
APPROVED
APPROVED

COVER, TEST CONNECTOR
AGC

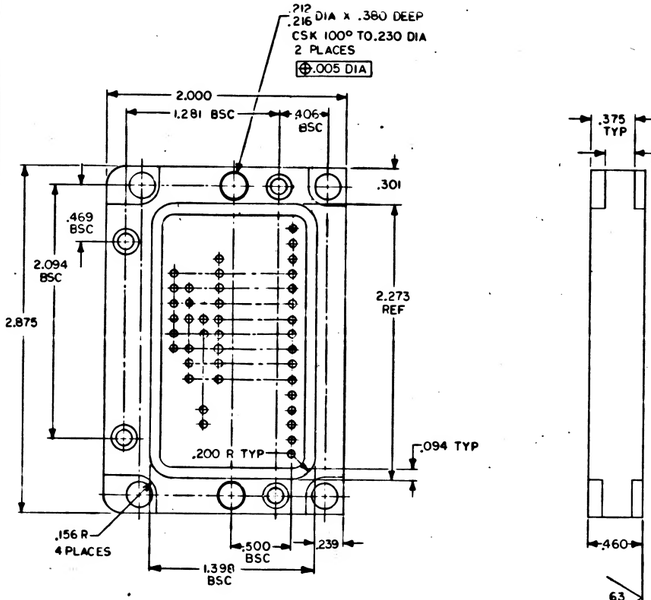
APPROVED MIT — DATE 2/24/66
APPROVED MSC — DATE 7/1/66

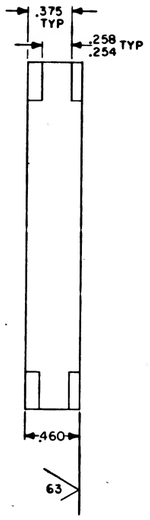
| CODE IDENT NO. | SIZE | DRAWING NO. |
|---|---|---|
| 80230 | D | 2004114 |

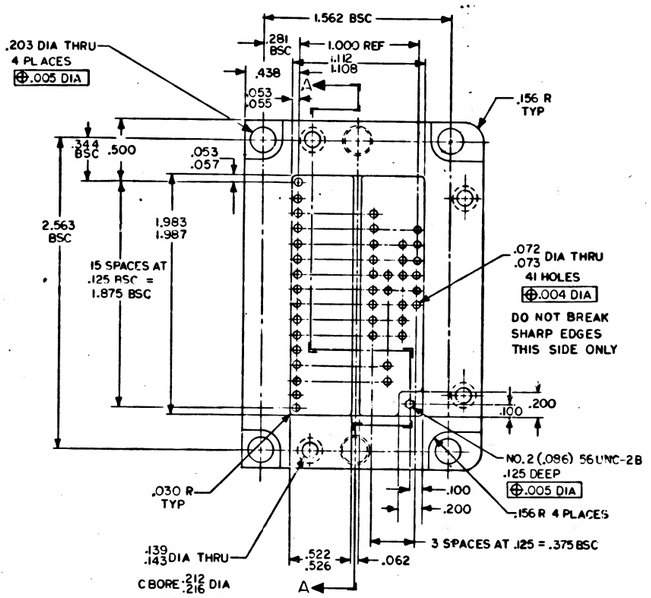
SCALE 1/1 — SHEET 1 OF 1

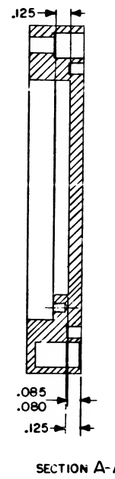
NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS, OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

| REVISIONS TDRR 32543 | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | DR | CHK | DATE | APPROVED |




SECTION A-A

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-1000
2. MATL: 6061 T6 AL PER QQ-A-250/11
3. CHROMATE PER MIL-C-5541, TYPE II, GRADE C, CLASS 3
4. ALL SURFACES 125 √ UNLESS OTHERWISE SPECIFIED
5. REMOVE BURRS AND SHARP EDGES .005/.015
6. IDENTIFY WITH PART NO PER ND 1002019

| QTY REQD | PART OR IDENTIFYING NO. | MATERIAL OR NOTES | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|---|
| | | | LIST OF MATERIALS | |

| | |
|---|---|
| 2003094 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± —— ±.005 ± —
DO NOT SCALE THIS DRAWING

MATERIAL
SEE NOTE 2

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

| | | |
|---|---|---|
| DRAWN | | 5-26-66 |
| CHECKED | Bonarrigo | 30 May 66 |
| APPROVED | | |
| APPROVED | | 5/31/66 |
| APPROVED | | 6 JUN 66 |
| APPROVED MSC | | DATE |

FRAME
CONNECTOR

| CODE IDENT NO. | SIZE | DRAWING NO. |
|---|---|---|
| 80230 | D | 2004190 |
| SCALE 2/1 | | SHEET 1 OF 1 |

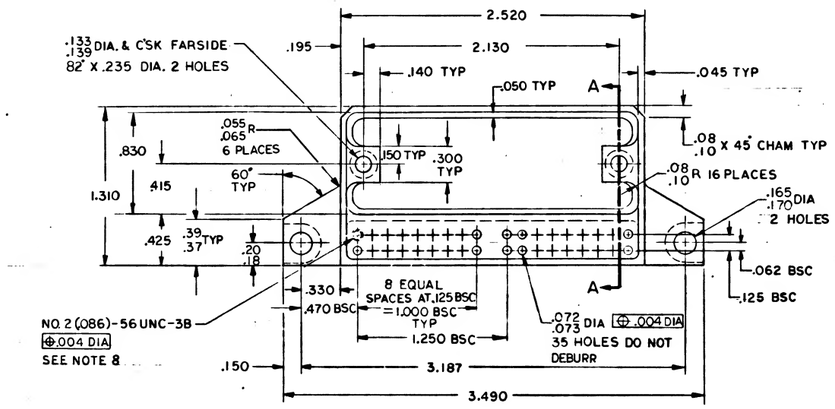
2004190

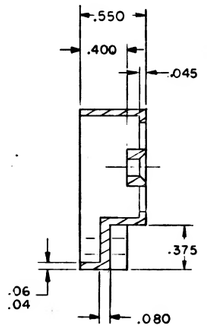
NOTICE - WHEN GOVERNMENT DRAWINGS SPECIFICATIONS OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY NOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THERETO.

2004925 -

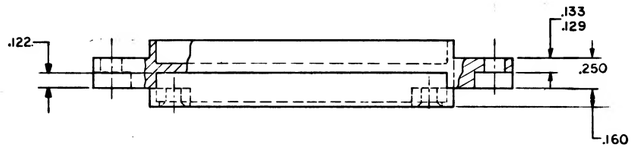
REVISIONS 20273

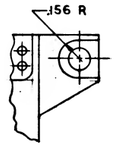
| SYM | ZONE | DESCRIPTION | DR | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|




SECTION A-A




NOTES

1. MATERIAL: MAGNESIUM ZK60A-T5 PER QQ-M-31, TEMP 5
2. REMOVE BURRS AND SHARP EDGES .010 MAX
3. ALL SURFACES 125
4. ANODIZE PER MIL-M-45202 TYPE II, CLASS D
5. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
6. IDENTIFY WITH DRAWING NO. AND REVISION PER ND1002019
7. RADII TO BE .010 R MAX UNLESS SPECIFIED
8. TAPPED HOLE TO BE FREE OF ANODIZE, COAT PER ND1002040

MASTER

| | |
|---|---|
| 2003918 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS ± DECIMALS ± .005 ANGLES ± 1°
DO NOT SCALE THIS DRAWING

MATERIAL
SEE NOTE 1

| QTY REQD | PART OR IDENTIFYING NO. | MATERIAL OR NOTES | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|---|

LIST OF MATERIALS

MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

| | | |
|---|---|---|
| DRAWN | | |
| CHECKED | | |
| APPROVED | | |
| APPROVED | | |
| APPROVED MIT | | |
| APPROVED MSC | | 6/24/66 DATE |

HEADER
KEYBOARD MODULE
AGC DSKY

| CODE IDENT NO. | SIZE | DRAWING NO. |
|---|---|---|
| 80230 | D | 2004925 |

SCALE 2/1 SHEET 1 OF 1

2004925 -

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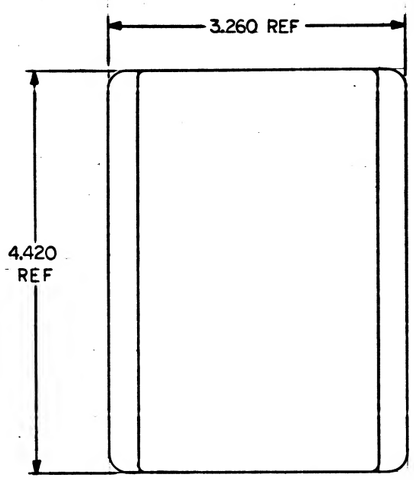
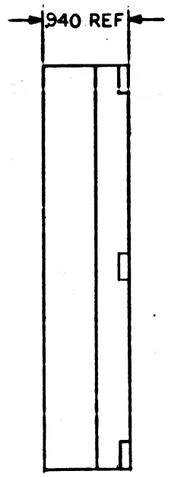
| REVISIONS 23636 | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | DR | CHK | DATE | APPROVED |
| | | | | | | |




NOTES

1. UNITS PER 1006315 TO HAVE 100 HR BURN-IN REQUIREMENTS COMPLETED BY VENDOR
2. UNITS PER 1006385 WILL HAVE 24 HR BURN-IN BY VENDOR. UNITS AFTER ASSY PER 2003936 TO HAVE ADDITIONAL 26 HR BURN-IN. AFTER BURN-IN UNITS TO HAVE NOT LESS THAN 10 FOOT-LAMBERTS AVERAGE INTENSITY AT 250V, – 800 CPS
3. UNITS AFTER BURN-IN TO BE IDENTIFIED WITH PART NO. PER ND1002019
4. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327

MASTER

| | |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| 2003936 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
CAPACITOR VALUES ARE IN μf
RESISTOR VALUES ARE IN OHMS
TOLERANCES ON
FRACTIONS DECIMALS ANGLES
± ± ±
DO NOT SCALE THIS DRAWING

MATERIAL

| QTY REQD | PART OR IDENTIFYING NO. | MATERIAL OR NOTES | NOMENCLATURE OR DESCRIPTION | FIND NO. |
|---|---|---|---|---|
| LIST OF MATERIALS | | | | |

MIT INSTRUMENTATION LAB
CAMBRIDGE, MASS.

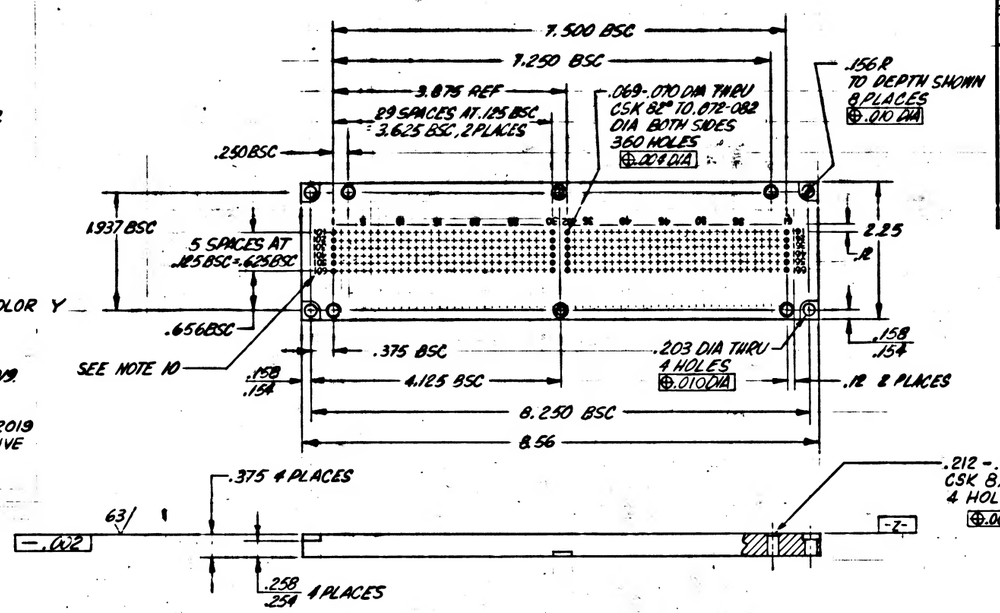
MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

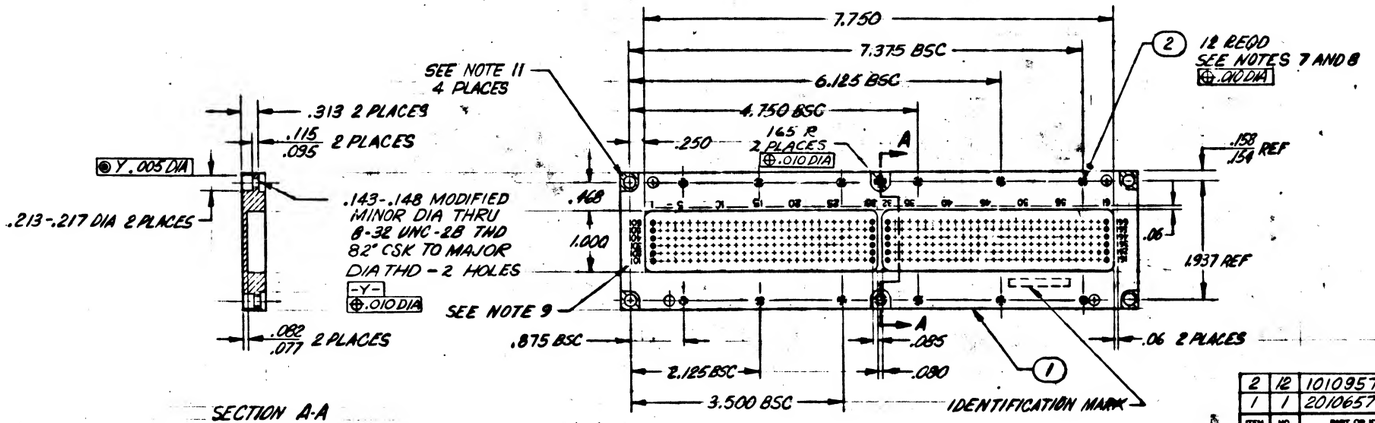
| | | |
|---|---|---|
| DRAWN J.P. Lamond | 2 DEC 65 | E/L LIGHT (BURN-IN) |
| CHECKED C.A. Pestka | 2 DEC 65 | INDICATOR, DIGITAL |
| APPROVED | | AGC DSKY |
| APPROVED Eldon C. Hall | 2 Dec 65 | |
| APPROVED MIT W. Kupfer | 2 Dec 65 | CODE IDENT NO. 80230 / SIZE C / DRAWING NO. 2004935 |
| APPROVED MSC A. C. METZGER | DATE | SCALE 1/1 / SHEET 1 OF 1 |

MODERN BLUE PRINT CO. D-19550

2010657

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM AZ31B-H24 PER QQ-M-44
3. FINISH: ANODIZE PER MIL-M-45202 TYPE I CLASS C
4. MUST BE FREE FROM BURRS.
5. UNLESS OTHERWISE SPECIFIED:
   A. ALL CORNERS TO BE .005 TO .015 R OR CHAMFER.
   B. SURFACE ROUGHNESS MUST NOT EXCEED 125 √
6. IDENTIFY WITH PART NUMBER PER ND1002019
7. COAT THREAD OF ITEM (2) WITH MIL-P-8585 COLOR Y
8. INSTALL ITEM (2) WET PER MS-33646, REMOVE TANG
9. MARK .06/.10 HIGH BLACK CHARACTERS PER ND1002019. CENTRALIZE AS SHOWN.
10. MARK .06/.10 HIGH BLACK CHARACTERS PER ND1002019 USING INK 1006271-10. DO NOT APPLY PROTECTIVE COATING. CENTRALIZE AS SHOWN ON -Z-
11. INDICATED AREAS TO BE FREE OF ANODIZE. COAT PER ND1002040. DO NOT EPOXY COAT




SECTION A-A

REVISIONS

| SYM | ZONE | DESCRIPTION | CHG NO. | DATE | APPD. |
|---|---|---|---|---|---|
| A | | INITIAL RELEASE PER TDRR 2P1-F5 | | | |

| ITEM NO. | NO. REQD | PART OR IDENTIFYING NUMBER | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|
| 2 | 12 | 1010957-008 | INSERT, SCREW THREAD LOCKING |
| 1 | 1 | 2010657-001 | BASE |

LIST OF PARTS AND MATERIALS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± .02 DECIMALS ± .005 ANGLES ± 2°
DO NOT SCALE THIS DRAWING
MATERIAL
CONTRACT NAS9-497

MIT INSTRUMENTATION LAB
DRAWN [illegible] DATE
CHECKED A Talone 23 SEP 65
APPROVAL D Gray 23 SEP 65
APPROVAL M Hurst 24 SEP
NASA APPROVAL A.C. METZGER
MIT APPROVAL W Gray 23 SEP 65
Charlesworth 24 SEP 65

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

BASE, ELECTRICAL CONNECTOR AGC (INSEPARABLE ASSY)

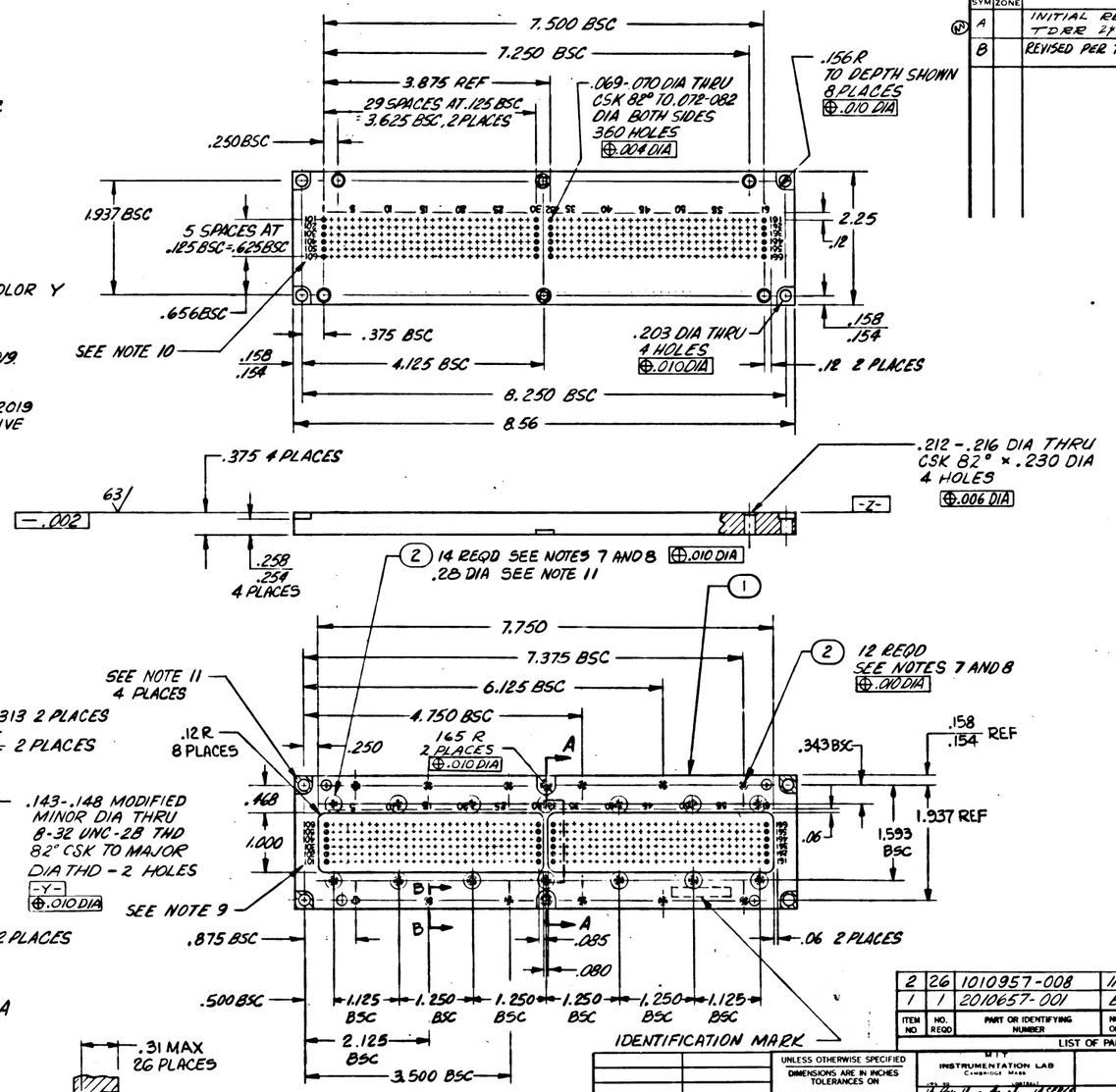
CODE IDENT NO. 80230
SIZE D
2010657
SCALE 1:1
SHEET 1 OF 1

6014334
NEXT ASSY
USED ON
APPLICATION

MASTER

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM AZ31B-H24 PER QQ-M-44
3. FINISH: ANODIZE PER MIL-M-45202 TYPE I CLASS C
4. MUST BE FREE FROM BURRS.
5. UNLESS OTHERWISE SPECIFIED:
   A. ALL CORNERS TO BE .005 TO .015 R OR CHAMFER.
   B. SURFACE ROUGHNESS MUST NOT EXCEED 125
6. IDENTIFY WITH PART NUMBER PER ND1002019
7. COAT THREAD OF ITEM (2) WITH MIL-P-8585 COLOR Y
8. INSTALL ITEM (2) WET PER MS-33646, REMOVE TANG
9. MARK .06/.10 HIGH BLACK CHARACTERS PER ND1002019. CENTRALIZE AS SHOWN.
10. MARK .06/.10 HIGH BLACK CHARACTERS PER ND1002019 USING INK 1006271-10. DO NOT APPLY PROTECTIVE COATING. CENTRALIZE AS SHOWN ON -Z-
11. INDICATED AREAS TO BE FREE OF ANODIZE. COAT PER ND1002040. DO NOT EPOXY COAT




| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG NO | DATE | APPD |
| (N) A | | INITIAL RELEASE PER TDRR 2121 5 | | | |
| B | | REVISED PER TDRR 25699 | | 9 FEB 66 | HTO WL |

| ITEM NO | NO. REQD | PART OR IDENTIFYING NUMBER | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|
| 2 | 26 | 1010957-008 | INSERT, SCREW THREAD, LOCKING |
| 1 | 1 | 2010657-001 | BASE |

LIST OF PARTS AND MATERIALS

| | |
|---|---|
| 60143-54 | |
| 204749 | |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON
FRACTIONS ± — DECIMALS ± .02 ANGLES ± 2°
± .005
DO NOT SCALE THIS DRAWING
MATERIAL
CONTRACT NAS9-497

MIT INSTRUMENTATION LAB CAMBRIDGE MASS
DRAWN [signature] DATE 14 SEP 65
CHECKED Thelma 23 SEP 65
APPROVAL L. Curtis 23 SEP 65
APPROVAL [signature]
NASA APPROVAL A. C. MILTON
MIT APPROVAL [signature] 23 SEP 65 21 SEP 65

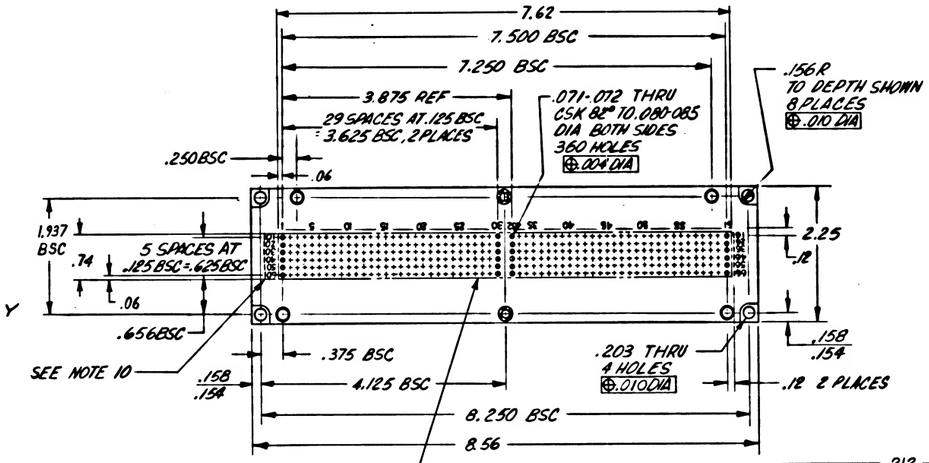
MANNED SPACECRAFT CENTER HOUSTON, TEXAS

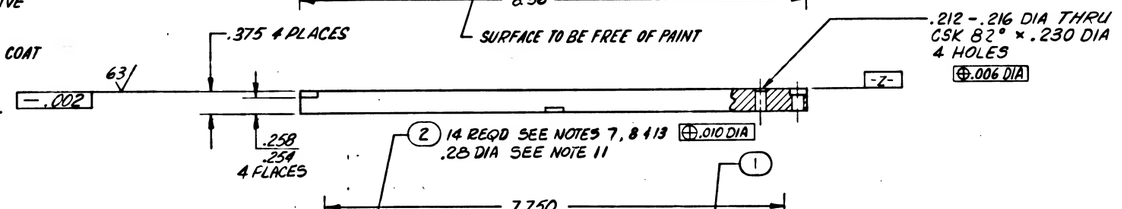
BASE, ELECTRICAL CONNECTOR AGC (INSEPARABLE ASSY)

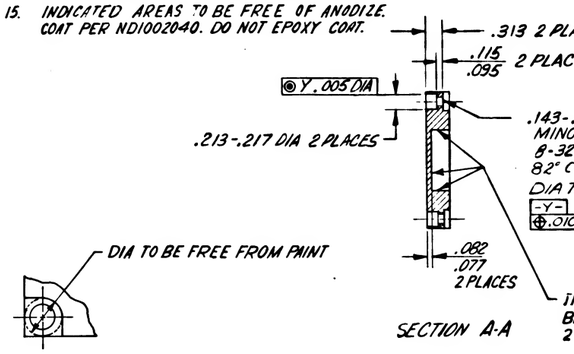
CODE IDENT NO 80230 | SIZE D | 2010657 | SCALE 1:1 | SHEET 1 OF 1

2010657

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM AZ31B-H24 PER QQ-M-44
3. FINISH: ANODIZE PER MIL-M-45202 TYPE I CLASS C
4. MUST BE FREE FROM BURRS.
5. UNLESS OTHERWISE SPECIFIED:
   A. ALL CORNERS TO BE .005 TO .015 R OR CHAMFER.
   B. SURFACE ROUGHNESS MUST NOT EXCEED 125 √
6. IDENTIFY WITH PART NUMBER PER ND1002019
7. COAT THREAD OF ITEM (2) WITH MIL-P-8585 COLOR Y
8. INSTALL ITEM (2) WET PER MS-33646, REMOVE TANG
9. MARK .06/.10 HIGH BLACK CHARACTERS PER ND1002019. CENTRALIZE AS SHOWN.
10. MARK .06/.10 HIGH BLACK CHARACTERS PER ND1002019 USING INK 1006271-10. DO NOT APPLY PROTECTIVE COATING. CENTRALIZE AS SHOWN ON -Z-
11. INDICATED AREAS TO BE FREE OF ANODIZE & PAINT. COAT PER ND1002040. DO NOT EPOXY COAT
12. PAINT PER ND1002279 USING PRIMER 1010992 AND PAINT 1008809-1 AND OVERCOAT PAINT PER ND1002291 TYPE III PAINT 1012543-003. ALL HOLES AND CBORE CAVITIES FOR THE MOUNTING SCREWS MUST BE PAINTED EXCEPT AS NOTED.
13. ALL THREADED HOLES MARKED "▲" MUST BE FREE OF ANODIZE AND PAINT.
14. VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING
15. INDICATED AREAS TO BE FREE OF ANODIZE. COAT PER ND1002040. DO NOT EPOXY COAT.







PARTIAL SECTION B-B
SCALE 2:1

| SYM | ZONE | DESCRIPTION | CHG NO. | DATE | APPD. |
|---|---|---|---|---|---|
| A | | INITIAL RELEASE CLASS A PER TDRR 51134 | | 3 JULY 66 | |

| ITEM NO. | NO. REQD | PART OR IDENTIFYING NUMBER | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|
| 2 | 26 | 1010957-008 | INSERT, SCREW THREAD, LOCKING |
| 1 | 1 | 2010760-001 | BASE |

LIST OF PARTS AND MATERIALS

| | |
|---|---|
| 2014749 | 6014515 |
| 2014749 | 2014567 |
| NEXT ASSY | USED ON |

APPLICATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± — DECIMALS ± .02 ANGLES ± 2° — ± .005

DO NOT SCALE THIS DRAWING

MATERIAL SEE NOTE 2

CONTRACT NAS9-197

DRAWN J. Talmage 22 JUN 66
CHECKED Ed Foster 23 JUN 66
APPROVAL A. Boyle 24 JUN 66
APPROVAL
NASA APPROVAL
APPROVAL

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

BASE, ELECTRICAL CONNECTOR AGC (INSEPARABLE ASSEMBLY)

CODE IDENT NO. 80230 | SIZE D | 2010760

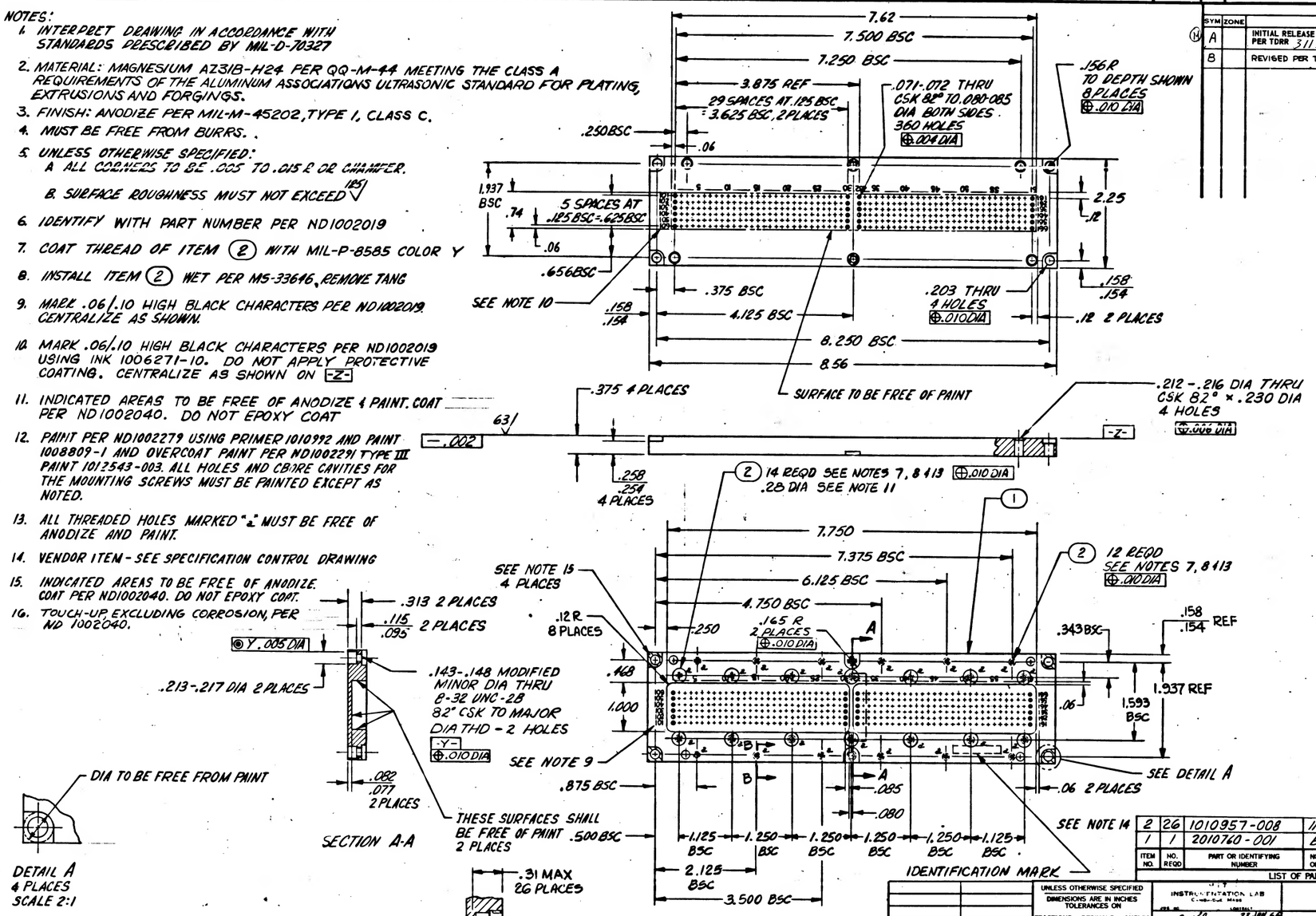
SCALE 1:1 | SHEET 1 OF 1

24 JUN 66

2010760

NOTES:

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327
2. MATERIAL: MAGNESIUM AZ31B-H24 PER QQ-M-44 MEETING THE CLASS A REQUIREMENTS OF THE ALUMINUM ASSOCIATIONS ULTRASONIC STANDARD FOR PLATING, EXTRUSIONS AND FORGINGS.
3. FINISH: ANODIZE PER MIL-M-45202, TYPE I, CLASS C.
4. MUST BE FREE FROM BURRS.
5. UNLESS OTHERWISE SPECIFIED:
   A. ALL CORNERS TO BE .005 TO .015 R OR CHAMFER.
   B. SURFACE ROUGHNESS MUST NOT EXCEED 125
6. IDENTIFY WITH PART NUMBER PER ND1002019
7. COAT THREAD OF ITEM (2) WITH MIL-P-8585 COLOR Y
8. INSTALL ITEM (2) WET PER MS-33646, REMOVE TANG
9. MARK .06/.10 HIGH BLACK CHARACTERS PER ND1002019. CENTRALIZE AS SHOWN.
10. MARK .06/.10 HIGH BLACK CHARACTERS PER ND1002019 USING INK 1006271-10. DO NOT APPLY PROTECTIVE COATING. CENTRALIZE AS SHOWN ON -Z-
11. INDICATED AREAS TO BE FREE OF ANODIZE & PAINT. COAT PER ND1002040. DO NOT EPOXY COAT
12. PAINT PER ND1002279 USING PRIMER 1010392 AND PAINT 1008809-1 AND OVERCOAT PAINT PER ND1002291 TYPE III PAINT 1012543-003. ALL HOLES AND CBORE CAVITIES FOR THE MOUNTING SCREWS MUST BE PAINTED EXCEPT AS NOTED.
13. ALL THREADED HOLES MARKED "▲" MUST BE FREE OF ANODIZE AND PAINT.
14. VENDOR ITEM - SEE SPECIFICATION CONTROL DRAWING
15. INDICATED AREAS TO BE FREE OF ANODIZE. COAT PER ND1002040. DO NOT EPOXY COAT.
16. TOUCH-UP EXCLUDING CORROSION, PER ND 1002040.




REVISIONS

| SYM | ZONE | DESCRIPTION | CHG NO. | DATE | APPD. |
|---|---|---|---|---|---|
| A | | INITIAL RELEASE CLASS A PER TDRR 31139 | | 5 JULY 66 | |
| B | | REVISED PER TDRR 32680 | | 28 JAN 67 | |

| ITEM NO. | NO. REQD | PART OR IDENTIFYING NUMBER | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|
| 2 | 26 | 1010957-008 | INSERT, SCREW THREAD LOCKING |
| 1 | 1 | 2010760-001 | BASE |

LIST OF PARTS AND MATERIALS

| | |
|---|---|
| 2014749 | 6014515 |
| 2014749 | 20K567 |
| NEXT ASSY | USED ON |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± —, DECIMALS ± .02, ANGLES + 2° − .005

DO NOT SCALE THIS DRAWING

MATERIAL: SEE NOTE 2

CONTRACT NAS9-197

INSTRUMENTATION LAB C.I.T. Cambridge Mass.

DRAWN J. Schwager 22 JUN 66

CHECKED Ed Foster 23 JUN 66

APPROVAL D. Bogia 24 JUN 66

APPROVAL Peter Engel 6

NASA APPROVAL R. Swick Hopkins

CCB APPROVAL D. A. Gray 9/20/66

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

BASE, ELECTRICAL CONNECTOR AGC (INSEPARABLE ASSEMBLY)

CODE IDENT NO. 80230 | SIZE D | 2010760

SCALE 1:1 | SHEET 1 OF 1

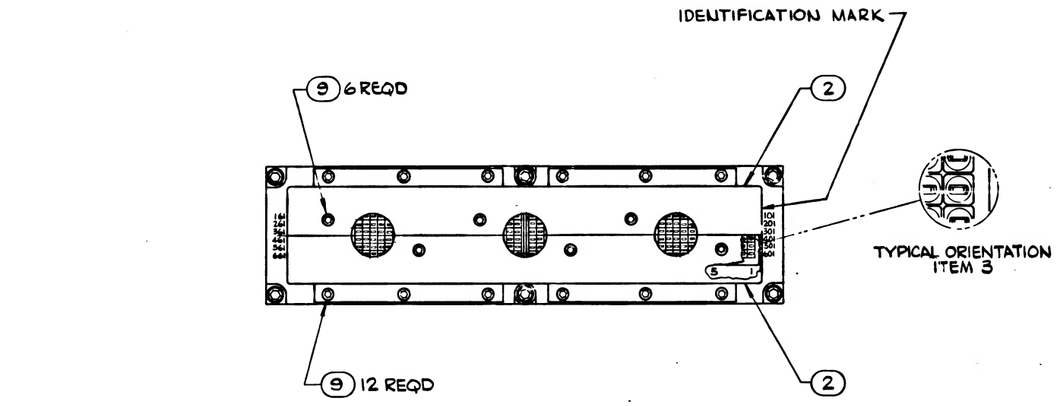
2010760

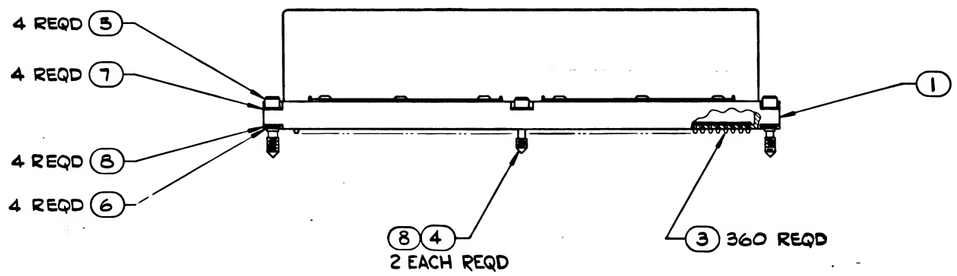
NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. VENDOR ITEM- SEE SPEC CONTROL DRAWING.
3. IDENTIFY WITH PART NUMBER PREFIXED BY "ASSY" WITH APPLICABLE DASH NUMBER PER ND1002019

REVISIONS

| SYM | ZONE | DESCRIPTION | CHG NO. | DATE | APPD. |
|---|---|---|---|---|---|
| | A | INITIAL RELEASE CLASS A PER TDRR 24956 | | 15 DEC 65 | G.C.R |



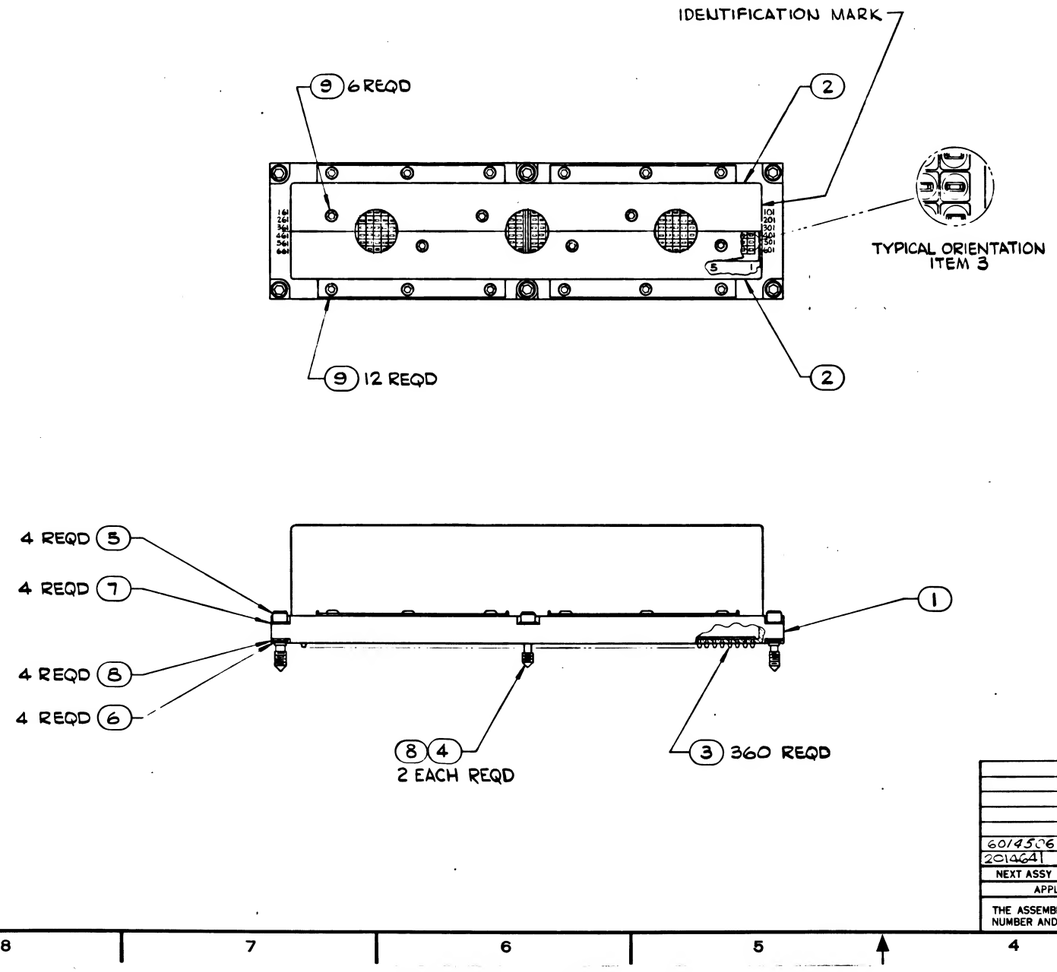

| QUANTITY REQUIRED | EFFECTIVITY | ITEM NO. | PART OR IDENTIFYING NUMBER | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

8 | 7 | 6 | 5 | 4 | 3 | B | 2014749 | 2 | 1

NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. VENDOR ITEM- SEE SPEC CONTROL DRAWING.
3. IDENTIFY WITH PART NUMBER PREFIXED BY "ASSY" WITH APPLICABLE DASH NUMBER PER ND1002019

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG NO. | DATE | APPD. |
| (*) | A | INITIAL RELEASE CLASS A PER TDRR 24756 | | 5 DEC 65 | |
| | B | REVISED PER TDRR 28530 | | 9 MAY 66 | PHG 5/6 |




| QUANTITY REQUIRED | EFFEC-TIVITY | ITEM NO | PART OR IDENTIFYING NUMBER | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|
| SEE NOTE 2 | 011 | 9 | 1006783-18 | SCREW, BUTTON HD |
| | 18 | 8 | 1004546-003 | WASHER, FLAT |
| | 6 | 7 | 1004546-001 | WASHER, FLAT |
| | 4 | 6 | MS16633-4015 | RING, RETAINING |
| | 4 | 5 | 1004579-1 | SCREW, JACKING |
| | 4 | 4 | 1008827-1 | SCREW, CAPTIVE |
| SEE NOTE 2 | 2 | 3 | 1010956-1 | INSULATOR, MALE |
| SEE NOTE 2 | 360 | 2 | 2014755 | SHELL, ELEC CONN (INSEP ASSY) |
| | 2 | 1 | 2010657 | BASE, ELEC CONN (INSEP ASSY) |
| | 1 | | | |

LIST OF PARTS AND MATERIALS

| NEXT ASSY | USED ON | APPLICABLE DASH NO. |
|---|---|---|
| 6014536 | 6014515011 | -011 |
| 2014641 | 2014567-011 | -011 |

APPLICATION

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±

DO NOT SCALE THIS DRAWING

MATERIAL —

CONTRACT NAS9-497

MIT INSTRUMENTATION LAB CAMBRIDGE MASS

DRAWN R. Rachel 10-Nov-65

CHECKED [illegible] 5 Nov 65

APPROVAL D. Cox Jr 18 Nov 65

APPROVAL [illegible]

NASA APPROVAL [illegible]

MIT APPROVAL [illegible] 21 Nov 65

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

# CONNECTOR, PLUG, ELECTRICAL AGC

CODE IDENT NO. 80230 | SIZE D | 2014749

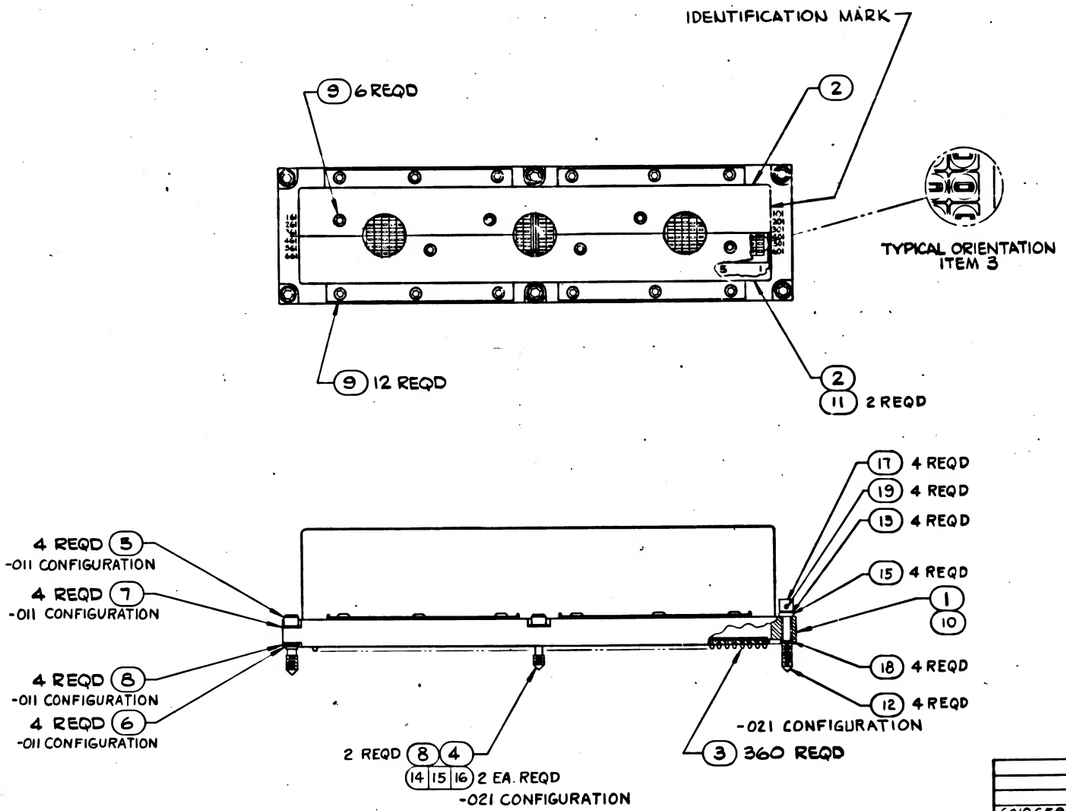
SCALE FULL | SHEET 1 OF 1

MIL 10780-P

8 | 7 | 6 | 5 | 4 | 3 | A | 2 | 1

NOTES

1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. VENDOR ITEM- SEE SPEC CONTROL DRAWING.
3. IDENTIFY WITH PART NUMBER PREFIXED BY "ASSY" WITH APPLICABLE DASH NUMBER PER ND 1002019




| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG NO. | DATE | APPD. |
| | A | INITIAL RELEASE CLASS A PER TDRR 24356 | | 15 DEC 65 | GDR |
| | B | REVISED PER TDRR 28530 | | 9 MAY 66 | PHG/JBS |
| | C | REVISED PER TDRR 31151 | | 3 OCT 66 | N.N./BPW |

SEE NOTE 2

SEE NOTE 2
SEE NOTE 2

| ITEM NO. | PART OR IDENTIFYING NUMBER | NOMENCLATURE OR DESCRIPTION | QUANTITY REQUIRED -021 | QUANTITY REQUIRED 011 | EFFECTIVITY |
|---|---|---|---|---|---|
| 19 | MS 171433 | PIN, SPRING | 4 | - | |
| 18 | 2004148-010 | WASHER | 4 | - | |
| 17 | 1004207 | DRIVE CYLINDER | 4 | - | |
| 16 | 1008827-002 | SCREW, CAPTIVE | 2 | - | |
| 15 | 2010768 | GASKET | 6 | - | |
| 14 | 2010767-004 | WASHER, STEP | 2 | - | |
| 13 | 2010767-003 | WASHER, STEP | 4 | - | |
| 12 | 2010782-002 | SCREW, JACK | 4 | - | |
| 11 | 2010769 | SHELL, ELECT. CONN. | 2 | - | |
| 10 | 2010760 | BASE, ELECT. CONN. | 1 | - | |
| 9 | 1006783-18 | SCREW, BUTTON HD | 18 | 18 | |
| 8 | 1004546-003 | WASHER, FLAT | - | 6 | |
| 7 | 1004546-001 | WASHER, FLAT | - | 4 | |
| 6 | MS16633-4015 | RING, RETAINING | - | 4 | |
| 5 | 1004579-1 | SCREW, JACKING | - | 4 | |
| 4 | 1008827-1 | SCREW, CAPTIVE | - | 2 | |
| 3 | 1010956-1 | INSULATOR, MALE | 360 | 360 | |
| 2 | 2014755 | SHELL, ELEC CONN (INSEP ASSY) | - | 2 | |
| 1 | 2010657 | BASE, ELEC CONN (INSEP ASSY) | - | 1 | |

LIST OF PARTS AND MATERIALS

| NEXT ASSY | USED ON | APPLICABLE DASH NO |
|---|---|---|
| 6010659 | 6014515 | -021 |
| 2010774 | 2014567 | -021 |
| 6014506 | 6014515-011 | -011 |
| 2014564 | 2014567-011 | -011 |

APPLICATION

THE ASSEMBLY PART NUMBER IS THE DRAWING NUMBER AND THE DASH NUMBER THAT APPLIES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES

DO NOT SCALE THIS DRAWING

MATERIAL

CONTRACT NAS9-497

MIT INSTRUMENTATION LAB Cambridge Mass.

DRAWN 6 Oct 65 DATE

CHECKED 13 Oct 65

APPROVAL

APPROVAL

NASA APPROVAL

MIT APPROVAL 21 Oct 65

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

# CONNECTOR, PLUG, ELECTRICAL AGC

| CODE IDENT NO. | SIZE | |
|---|---|---|
| 80230 | D | 2014749 |

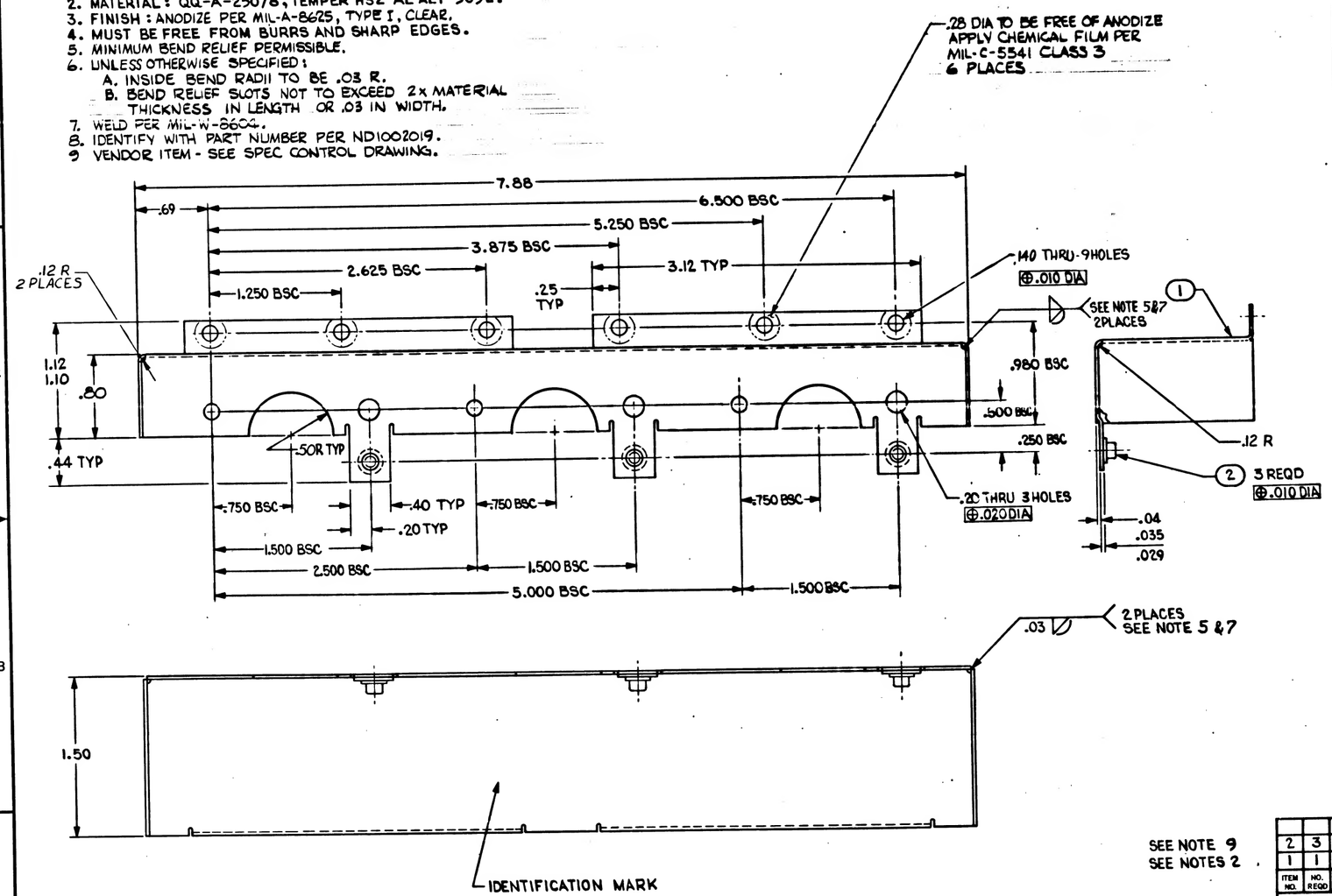
SCALE FULL SHEET 1 OF 1

2014749 2

A | 2014755 | 2 | 1

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | DESCRIPTION | CHG NO. | DATE | APPD. |
| A | | INITIAL RELEASE PER TDRR 2479/6 | | | |

NOTES:
1. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
2. MATERIAL: QQ-A-250/8, TEMPER H32 AL ALY 5052.
3. FINISH: ANODIZE PER MIL-A-8625, TYPE I, CLEAR.
4. MUST BE FREE FROM BURRS AND SHARP EDGES.
5. MINIMUM BEND RELIEF PERMISSIBLE.
6. UNLESS OTHERWISE SPECIFIED:
   A. INSIDE BEND RADII TO BE .03 R.
   B. BEND RELIEF SLOTS NOT TO EXCEED 2x MATERIAL THICKNESS IN LENGTH OR .03 IN WIDTH.
7. WELD PER MIL-W-8604.
8. IDENTIFY WITH PART NUMBER PER ND1002019.
9. VENDOR ITEM - SEE SPEC CONTROL DRAWING.




SEE NOTE 9
SEE NOTES 2

| ITEM NO. | NO. REQD | PART OR IDENTIFYING NUMBER | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|
| 2 | 3 | 1000076-1 | NUT, CLINCH FLUSH MOUNTED |
| 1 | 1 | 2014755-001 | SHELL |

LIST OF PARTS AND MATERIALS

| | |
|---|---|
| COMPLETE SET USED ON | 2014749-011 |
| NEXT ASSY | 2014567-011 |
| APPLICATION | |

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ±.02 DECIMALS ±.005 ANGLES ±—
DO NOT SCALE THIS DRAWING
MATERIAL —
CONTRACT NAS9-497

MIT INSTRUMENTATION LAB Cambridge, Mass.
DRAWN [illegible] 29 Nov 65
CHECKED Ed Foster 29Nov65
APPROVAL [illegible] 29Nov65
APPROVAL [illegible] 29 Nov 65
A. C. MITCHELL
NASA APPROVAL
MIT APPROVAL [illegible] 12/6/65
Charleston 9 Dec 65

MANNED SPACECRAFT CENTER HOUSTON, TEXAS

SHELL, ELECTRICAL CONNECTOR (INSEPARABLE ASSEMBLY) AGC

CODE IDENT NO 80230 | SIZE D | 2014755 | SCALE 2:1 | SHEET OF

MASTER

MIL 1077-DK